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The New Preventive Medicine

SLOWLY the consideration of preventive medicine is emerging from the realm of academic discussion and approaching the phase of practicality. Long the topic of the essayist, the builder of Utopian card-houses, the idealist is now rudely awakened by the blunt query—what are you going to do about it? Go ahead with your muck-raking. Keep up the jeremiads. But if you quit with these you only make matters worse, for before this we did wrong unwittingly, and now we can only continue with the awakened consciousness of guilt.

There's all the difference in the world. One may flounder along with the old galenic abominations, consoling himself with the thought that he does the best he can, but since the choice between these and absolute therapeutic certainties is placed squarely before him, the matter is different; and as Laura, the great Italian pediatrist, exclaimed: "The adoption of these becomes less a matter of choice than one of duty."

In *The Medical Record* for February 17, 1912, A. L. Soresi discusses "General Medical Education: The Only Rational Preventive Medicine." He objects to the limitation of defined preventive medicine to the infections, when it should embrace all disease, defined as "disharmony of physiologic function." Whose fault is it that so very little has been accomplished? His theorem is that "a general compulsory medical education, based on a good practical knowledge of anatomy, physiology, pathology, and hygiene, beginning with the elementary training of children, together with a general diffusion of such knowledge through all grades of society, is necessary to this end." His argument takes up prophylaxis against infections, vaccines, tuberculosis, cholera, malaria; overcrowding; social ignorance; "constipation, which is very little thought of, is claiming more victims and doing more harm than the white plague"; congenital imperfections, wrong ideals as to chastity and the influence of unmarried teachers in inculcating these, and the waste of teaching in school matters, 90 percent of which must be forgotten because useless thereafter.

From these premises he deduces the conclusion that the schools should teach every child mainly the science of medicine, since this most closely concerns his success in life; leaving the art to those who make of it their profession.

The general objection to this is the same as that to the doctor who prescribed turtle soup and champagne for the sick laborer.

Dr. Soresi suggests an education that would be very excellent for everybody; but we are moderate and would be satisfied were the *doctors* really to possess it and have the opportunity so to apply it, so as to prove their worth to the community.

Education should proceed along common lines to the point where individual vocations separate. All children need to learn the primary branches: to speak, read, spell, cipher, the outlines of geography, history, hygiene; and to have such physical development as every child requires. Then they diverge, for the artisan needs of his classics what pertains to his art in classic days, and its subsequent development; the professional man needs similar parts of the classic store; the merchant, the economic and commercial phases; this, so that each may study his own future lifework in the true developmental manner.

Our builders of sewers may today take a lesson from those structures as seen in the ruins of Nineveh, whose perfection they do not now approximate. The arrangements for warming Roman villas in England are as yet unexcelled, and the subsiding reservoirs in the aqueducts of Rome are admirable.

The future lawyer might better devote to Demosthenes, Cicero, Quintilian, the Pandects, Leviticus, and other works that describe the development of Justinian's institutes and the history of law, and the effects of legislation on the various races of men, than waste time over wars and entomology.

The coming doctor might neglect the higher mathematics and the struggles between Athens and Sparta, Rome and Carthage, Persian and Greek, to study the beginnings of his own art, and the sciences from which its modern phases have developed.

The bricklayer would be the better for knowing why the bond Hebrew was made to mix straw with his clay, how the sun-dried bricks of Babylon have served to build Seleucia, Ctesiphon, Cufa and Bagdad, and are yet in use after thirty centuries.

The argiculturist might study the irrigation system that created the wealth that made Mesopotamia the world's mistress eighty centuries ago.

The legislator might with infinite wisdom learn the rise and fall of the Gracchi, of Caesar, Rienzi, Savonarola, Napoleon, Cromwell, and of many another who rose on the flood of popular favor and fell with its ebb.

The theologian could learn a plenty from the history of the early church; and a true record of the influences underneath the establishment of his favorite creeds might conduce to modesty in his advocacy of their strictly divine origin. The comparative history of religion may be written some day, and should, as a cyclopedia, form the backbone of the theologian's library. Its study might detract from the fervency of his sectarian allegiance, but conduce to a better knowledge of men and morals, and the means of promoting both.

The worker in cement might learn, from a study of ancient Roman structures, how to impart endurance to his own.

The commercial student might learn how the rocks of monopoly divert the currents of trade, and how, like water, money seeks the lowest levels; finds new channels of outlet, and, if too absolutely restrained, becomes stagnant and evaporates.

The designer and the manufacturer of costumes may find in the delineations of Greek, Egyptian, Babylonian and Indian sartorial art the reasons why in these and every other land and age Woman has been found lovely and worthy of the devotion of man. They might even include the curious observation of Col. Chaille Long, that the Mombuttu women, wearing absolutely nothing, expect and receive the same respectful treatment accorded their civilized sisters who place so much dependence for this effect on their clothes.

How much the professional athlete may learn from his forbears of classic days: when disc-throwing was introduced into American athletics by the Medico-Chirurgical College of Philadelphia, in its production of the Panathenaia, in 1888, those who participated found that this exercise developed the existence of certain muscular structures which no other had brought to consciousness.

There is not a vocation of man or of woman today that might not be the better for a scientific historic study during the school days following the grammar school. About here the education should diverge, and individuality and purpose rule. This means that at the completion of the grammar grade the pupil should make choice of his future work. The division may at first be generic, manual, professional, or mercantile, and for a time the education along each of these be similar. Later the choice should be more specific, and the training correspondingly particular.

Here we join issue with Dr. Soresi—the education he advocates should be that of the physician, as the education of the artisan should be his exclusively. The true way out is not educating the whole community into doctors, or into preachers to improve their morals, or into artisans so they may know wherein their house-builders are robbing them, or into any other of the innumerable specialties into which the complexity of modern social development has divided mankind. It is in completing and rounding out the training of each, and then giving him the fullest opportunity of putting his knowledge to practical use.

We as physicians must become truly practicians of preventive medicine; but we can only do this by taking charge of our patients, not merely while ill, but so as to regulate their hygienic conditions to prevent their getting sick.

Illness is too expensive to the individual and to the community; we can not afford it nowadays. We can well afford to pay the doctor-hygienist well to keep us well.

I find that thorough elimination will cure more ailments than any other one line of procedure.—
—W. T. Marrs.

MORE TROUBLE

The measure introduced by Representative Richardson in Congress is one which, if made a law and rigidly enforced, will destroy the drug trade in so far as galenics are concerned. This measure purports to carry out President Taft's recommendation with reference to proprietary medicines and the therapeutic claims upon their labels. It proscribes all drugs recognized in the United States Pharmacopeia and National Formulary if they differ from the standard strength, quality or purity, as determined by the tests in these publications, official at the time of investigation. This means that every preparation shall be exactly of the specified strength, no more or no less.

Since the strength of galenics is constantly changing, it means that the entire stock of every druggist sooner or later would become illegal and render him liable to prosecution under the law. The only safe preparations which a druggist can handle, in that event, would be the alkaloids, which, preserved in pure sugar of milk, undergo no change with the lapse of years, unless air and moisture are admitted to the container.

The proprietary-medicine business is likewise demolished by this fact, which proscribes every claim upon the label of the package, excepting such as can be proved by reference to the recognized standards. This cuts the ground from under the feet of those who have reaped fortunes by promising impossible cures.

HOW TO WRITE

There are oceans of stuff printed in medical journals and books that merely adds to the bulk and increases the work of the editor without adding any useful thing to the profession's stock of knowledge. Meanwhile we suffer for want of information that can only be supplied by the members of the profession. If men only knew it, they could be of use and gain reputation by their writings. But how?

First, have something to write that is worth printing. We are deluged with articles voicing just one idea: "Send me your patients." Others are compiled from the works of standard authors that are accessible to every doctor who reads. Others, and these are the favorites with the high-brow editor, are compilations of the work done by others, gathered from magazines and other sources by study of the Index Medicus. As an excuse, the compiler may have a single case of the kind treated, and he presents all the cases so far pub-

lished, collected and tabulated. A useful form of publication for the man whose library opportunities and time render it possible; but the active practician can not possibly do such work.

Yet nobody should write on any topic for publication until he has read all accessible matter on the subject treated. Frequently a reference to the textbooks will show that the same observation has already been made, perhaps gone into the classic descriptions, or else disproved by subsequent and more extended study. Do not be too sure you have been the first to catch on to a good idea—there are lots of other smart men about.

After having "read up" about the subject, do not make your paper a transcript of the book chapter. Many seem to think they must take this as a framework, and dilate upon the pathology, symptoms, course, prognosis, diagnosis, and possibly a few words on treatment, as if they were writing a book. We all have books, thank you, and do not need a reprint in a journal, which, being such, is supposed to furnish something newer.

The material we want is the hardest to get, and the easiest to prepare. Nobody but the clinician can furnish it, and he does not need a library for his materials. Just clinical reports. To my mind the ideal article for a medical journal was a paper by Dr. Melvin, of Saguache, Colorado. He took up the treatment of pneumonia by the alkaloidal method and reported the cases in which he had applied it. Pneumonia is a different matter in that elevated region, and we want to know whether this treatment is applicable there, and in the lowlands, the city, the country, in summer, in winter, in the north, in the south, in whites, negroes, Indians, Mongols. Every man who treats pneumonia should contribute his results to establish the uses and the limitations of the method. Drat the books; use your own eyes and brains.

We want every man who reads a therapeutic suggestion in these pages to try it on his patients and let us know the results. Don't for a moment imagine we want only favorable reports—we want the truth. If the remedy does not meet expectations, we want to know why: whether your application was wrong, your circumstances unsuitable. Place a therapeutic suggestion before fifty thousand practicians; let every one who has the opportunity try it out; then report, and have these reports tabulated, compared, the reasons for nonsuccess detected, and we should have the exact uses and limitations of the treatment so fixed that we would know just when and where to apply it. A definite step in advance would be made, and one more point in practice firmly established.

For want of this the path of the student and practician is encumbered with countless wrecks of ideas that have been neither proved nor disproved, but remain to perplex and bewilder the seeker after knowledge.

Here is an opportunity: Does berberine really contract relaxed connective tissues? If so, it should be curative in prolapse of the uterus, gastroptosis, enteroptosis, floating kidney, the relaxed pendulous bellies of multipara, and all cases where such relaxation enters as a feature of any case. I think it does; but what is my testimony worth, unsupported! My method is to replace the uterus, hold it up by a tampon of wool, and give berberine one to three grains a day for six weeks. Treating a dilated and flabby stomach or a pendulous belly, I apply the best available support, restrain the use of fluids and food, especially forbidding beer, which directly favors connective relaxation, and give the berberine as before. This drug can not be expected to lift or support a displaced organ or make amends for bad habits of eating and the drinking of floods of liquids; but correct these, supply an adequate support, and add berberine—you should get a distinctly better result than when you use the support without the berberine.

That has been my experience; but I want Melvin of Colorado, Cuzner of Florida, Wolverton of Iowa, Musgrove of Washington, Radue of New Jersey, Parkinson of Utah, Blackwood of Philadelphia, Daniel of Texas, Moody of Idaho, McKee of Cincinnati, Marrs of Peoria, Buck of Tennessee, Kendrick of Mississippi, Ritter of Williamsport, Perry of Minnesota,

Shepard of California, Bryce of Richmond, Fairex of New Orleans, Servoss of Nevada, Williams of Washington (D. C.), Hill of Milwaukee, Cornet of Connecticut, Phelps of Boston, Sanborn of Vermont, Safley of Montana, Mizell of Georgia, Linton of Indiana, Hornibrook of Iowa, Wilson of Michigan, Johnson of Minnesota, Register of North Carolina, Strock of New Jersey, Wahrer of Fort Madison, and every other who cares for the idea enough to give it a try-out to do so and report.

In this way we might secure data that would decide such matters once and for all time.

I am in the habit of propounding this conundrum to my students: When is rheumatism not rheumatism? There are two answers. One is: "When it is something else." A better one is: "Nine times out of ten."—
—Solomon Solis Cohen.

UTILIZING CRIMINALS

The disposition of criminals has become a more difficult question in these latter days. Sentimentalists with an exaggerated valuation of human life, apart from the value of its possessor, cry out against the crime of shedding the blood of even the most depraved and hardened murderer. Femininity joins in the protest against a penalty that removes a male of vigor and power, though also brutality, from the number of possible mates. Penologists object that capital punishment fails as a deterrent against crime in that it is so quickly forgotten. Altogether the question remains unanswered, What shall we do with the convicted murderer?

The Utilitarian asks to be heard here: In *The Dietetic and Hygienic Gazette* for February, 1912, an editorial proposes that these men shall be utilized as subjects for experimentation. Life imprisonment inflicts on the community the burden of the criminal's support, and when he is compelled to labor he comes into competition with free and innocent citizens under circumstances that cheapen the work of the latter sometimes disastrously. "There is often a need for the stepping-stone of a human subject from laboratory work to practical application of curative agents, or even for use in the laboratory itself, and it would seem a great blessing to substitute a doomed outlaw for such purposes of experiment rather than risk the lives of the investigators themselves."

There is much to be said in favor of this proposition. The prime object of legal penalty is to deter others from similar crime. Without this the idea of punishment alone is archaic—a relic of Moloch worship, mere savage revenge. The values of penalties should therefore be judged by their deterrent influence. Against the crime of deliberate murder we may oppose the penalties of death, life imprisonment, and this new proposition of utilization for experimental purposes—with death or life confinement as a sequence, since nobody would contemplate setting such men free after they had been thus treated.

Life imprisonment has been tried and proved wanting. Murder has increased vastly where this has been adopted. The man who is planning murder may justly count on the extreme difficulty of bringing such a crime home upon its perpetrator, inducing a jury to disregard the innumerable suggestions to find a reasonable doubt or a less degree of crime; and even if convicted and sentenced the chances are so great that after a few years a pardon can be had, that he may well conclude to take the chances, if the incentive to the killing is great.

For any lesser crime castration would be the ideal penalty, since it leaves the criminal as a walking object lesson, a perpetual reminder of what might be expected by an imitator. The punishment would be lifelong, in the jeers of the urchins and the pangs of self-consciousness. A serious peril lies in this, that the punishment would be so great that it might unseat the intellect, and by constant brooding over it the man become a public danger. But as a deterring influence it far exceeds taking life.

The proposition to utilize the murderer for philosophic experiment has in it something mysterious, appalling, that is sure to arouse the sentimentalists in opposition. They will say that we may have a right to kill the man, but that modern sentiment will not stand for his torture. Probably

there would be little if any pain attending the work, but the public and the intending criminal would think there would be, and we have here the deterrent influence we seek. From this would surely arise a feeling of abhorrence for the profession that perpetrated the supposed horrors, that would serve to widen the separation between medicine and the people, and increase the bond between them and the pretenders. The possibility of benefit to humanity from the work would weigh but little against the popular prejudice thus engendered. We are not yet sufficiently civilized to expect that much.

"Slumkey forever!" roared the honest and independent.

"Slumkey forever!" echoed Mr. Pickwick, taking off his hat.

"Who is Slumkey?" whispered Mr. Tupman.

"I don't know," whispered Mr. Pickwick in the same tone. "Hush, don't ask any questions. It's always best on these occasions to do what the mob do."

"But suppose there are two mobs?" suggested Mr. Snodgrass.

"Shout with the largest," replied Mr. Pickwick.

Volumes could not have said more.

WHAT SHALL WE DO WITH THE CRIMINAL?

One of the members of the editorial staff of CLINICAL MEDICINE has just been heard on the subject of capital punishment. May another have his say on this subject?

After all, why do we retain this relic of the *lex talionis*—this conception of the punishment of crime as the taking of "an eye for an eye and a tooth for a tooth?" It is barbaric, savage, elemental—arousing in the minds of those who see the execution of these criminals, either personally or by proxy, through the sensational press, all the passions that it should be the effort of society to eradicate.

Society has wreaked its vengeance on the murderer by hanging, decapitation, crucifixion, and electrocution; by breaking on the wheel, impalement, the axe, the garotte, and the guillotine; it has surrounded the execution of the law with every artifice that could induce fear or inspire terror, yet there is no evidence that in so doing it has made the slightest impress upon the incidence of crimes of violence. Indeed, the evidence seems to prove the exact contrary. When punishment was most severe, when death was the penalty for nearly every crime, from petty larceny to high treason, the infractions of the law seemed to be most frequent. During the reign of Henry VIII more than 72,000 people were hanged in England, yet the whole kingdom was seething with disorder, neither life nor property being safe anywhere in it.

Modern society is rapidly growing to look upon capital punishment as an anachronism. The death penalty has been abolished in Portugal, Roumania, Switzerland, Norway, Italy, and Russia; in the two latter countries regicides being excepted from the ordinary provisions of the law. Holland still carries capital punishment on its code, but there have been no executions since 1860; while destruction by the guillotine is authorized in Belgium, no one has been punished by death, in that country, since 1864; and capital punishment has not been inflicted in Finland since 1824. The number of murders and other crimes of violence in these countries will compare favorably with the number in other portions of Europe.

In the United States, capital punishment is forbidden by law in Maine, Michigan, Wisconsin, and Rhode Island, the last-named state making an exception in the case of murders committed by persons sentenced to life imprisonment. A comparison of the criminal records of these states with those of other states will show, quite plainly, that, if "the prime object of [this] legal punishment is to deter others from similar crime," it fails utterly.

The only other purposes that can be adduced for resorting to this heroic and dreadful remedy are to save the state the expense of maintaining these criminals, (who are assumed to be both useless and dangerous), the prevention of the propagation of a criminal class, and the danger that the criminal may later on be turned loose, to reenter a career of crime.

Now, if the life of the murderer is saved, how can it be made of economic value? The writer confesses that the idea of using a man as an experimental animal—as proposed—is abhorrent to him. Of course, up to a certain point he might be so used

with advantage to all concerned—himself included; but beyond that point this would become one of those "unusual punishments" which are properly condemned by society, and which would never have the approval of Americans. We shall refer to other possibilities for usefulness for the criminal a moment later.

As to the propagation of criminals, this is a real danger. Forty years ago Dugdale traced 900 descendants of a drunken, feeble-minded Dutch backwoodsman. In this family, known as the "Jukes," the entire record is written full of pauperism, sex-immorality and crime. Several of its members went to the gallows, many of them to prison, scores of the women were prostitutes, and the majority were dependents of the state in one way or the other. Up to 1877 this family had cost organized society more than a million and a quarter dollars. When Davenport brings that record up to date it will astound the world.

Another degenerate family was the "Ishmaelites" of Indiana, traced by McCulloch. This family has a pauper record that is appalling, and among its members were murderers and many prostitutes and other undesirables. McCulloch found that *this family had intermarried with more than two hundred other families*—to say nothing of numerous illegitimacies.

There are other families of which we have records nearly as bad, and there are doubtless many others whose germ-plasm is fundamentally rotten. Think of the danger from such a series of individuals, remembering that any one of the progeny of these mentally or morally diseased individuals may propagate other defectives, and these, in turn, mix their blood with yours or mine.

Rather than to deter others from crime, as individuals, the writer would place first as the object of our penal code the protection of society from the increase of criminals. This can probably best be accomplished by the sterilization of any person coming under the charge of the state who is known to be a source of contamination. Castration is not necessary. The state of Indiana has already legalized the operation known as vasectomy, which makes the man incapable of propagation, without rendering him actually impotent. Ovariectomy, which would accomplish the end desired in the woman, seems to be sought rather than feared by the "better half" of society.

As to the danger of the murderer being pardoned and turned loose to prey upon society later, we confess we see nothing greatly to be feared. Few murders are deliberately planned—nor is the murderer necessarily totally depraved. There are doubtless many circumstances under which the pardoning power might be wisely used. As a matter of fact, how many authentic instances are there of pardoned murderers being guilty of crimes of violence? It would be interesting to know.

Why should we preserve the life of the murderer? We have already shown our distaste for treating him like a dog or a rabbit, in "vivisection," socalled. There is plenty of useful work that he can do without putting him into competition with union labor. In providing this useful labor, is it not possible to consider the interest of the criminal individual, as well as the welfare of society? After all, society is made up of these "cells" which we call men and women, and the more properly these "cells" perform their several functions, the more healthy will the state become. Put these people to work. Let them earn something. Let them grow by learning, and let them understand that their futures depend upon the perfection with which they do their work, and upon the development of their character. Rarely should it be necessary to close entirely the door of hope.

But what work—and not "rile" our union workman? Contract work—making brooms and shoes, and pounding stone, all to enrich more or less corrupt politicians and their friends? By no means. Give these people land to cultivate. Let them raise what they eat. Let them make what they wear. Teach them trades which will enable them to provide for themselves reasonable luxuries. Make the penal community as nearly as possible a self-supporting one. The excess of labor should go into public works—into the building of great and beautiful highways, the reforesta-

tion of waste land, the digging of canals and the drainage of swamps; the production of food-products for the state eleemosynary institutions; it should be used to create parks and pleasure grounds, national, state and municipal, in the erection of public buildings and other monumental works for the whole people.

Teach the criminal the value of self-improvement. Give him some kind of incentive to moral betterment. To make a better man of him is not "pampering" him. Many men who go into prison, while morally weak, are intellectually sound. Why destroy the possibility of an intellectual output? The two creations of Oscar Wilde by which he will be remembered longest are "De Profundis" and "The Ballad of Reading Gaol"; one was written in prison, the other inspired by prison life. A convict in the Minnesota state prison contributed to the Century Magazine a poem which amazed our literary critics—and won him a pardon. If a man has this kind of thing in him, its development should be encouraged, not stifled. Even punishment may be utilized for the enrichment of all human life.

To sum up, therefore, in this writer's opinion the best method of "utilizing criminals," even murderers, is not to destroy them utterly, but to consider them as valuable social units, to be utilized under such conditions of enforced segregation as to make them incapable of doing harm. If these individuals are of the hereditary criminal type—victims of that disease, degeneracy, they are to be sterilized. They should be used to do the work of collective society, but encouraged to make the most of themselves, with a view to their possible return to the ranks, if they can show themselves worthy. They should be made producers—taught to work with their hands and encouraged to develop the caliber of their brain, for their good and the common good.

They are not to be thought of or treated as animals, to be tortured or experimented upon. After all, they are men and women. Though they be criminals, have they not "organs, dimensions, senses, affections, passions? fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means" as we are?

SODIUM SUCCINATE

The Council on Pharmacy and Chemistry has admitted sodium succinate to the honors of the officinum. Henceforth it is to be received as a fully accredited member, its union card in its pocket, entitled to all the privileges and immunities of the guild. Officially it ranks as "a saline cathartic"—for which no living man ever used it—and has a claim (on not very good evidence) to an antiseptic action in the biliary tract; while "some (thousands of) clinicians claim that it is useful in combating infections of the gall-bladder and biliary passages."

That's a good deal for the Council. We always feel relieved when their pronunciamentoes are not radically wrong; and a slighting, grudging half-truth like this is above the average expectation. When a drug can not be tested on a healthy dog, and nothing is available but "clinical observation," these gentlemen are helpless.

Is there a man or woman here who believes that I come here to pronounce a eulogy on the doctor? If so, I plead guilty, and am proud of my guilt. I wish I could convince you that in all your social, philanthropic, altruistic enterprise the doctor should count first.

—A. Jacobi.

"MOTHERHOOD"

We call especial attention to our frontispiece this month. This beautiful picture of a mother and her child is the photograph of a Chicago woman and her little one. It has already appeared once in print, in the *Bulletin* of the Chicago Department of Health. We were so much pleased with it, and so sure that physicians everywhere would be glad to have copies, that we secured the consent of the subject of the picture—the mother herself—to use it in CLINICAL MEDICINE.

Of the beauty of the photograph it is not necessary to say anything. The spirit of the picture, so wonderfully brought out by the photographer, is that of mother love—maternity. After all is there anything

more beautiful in life than this? Can any man look at such a picture without thinking of his own mother, or the mother of his own children—those that he has or hopes some time may be his?

We know that many of the "family" will want copies of this picture for framing. That all may be provided we have had a number of extra copies printed on heavy enameled paper suitable for this purpose. We will supply these, as long as they last, at five cents a copy. Get one for your office, and provide a liberal stock for distribution among your patients.

Every now and then the impossible becomes possible. A professor once made the following bright reply to one of his students who had declared that a certain work was impossible: "Yes, of course it is impossible; but if you and I do not watch out, some fool will come along and do it right before our eyes."—J. A. M. A. And yet, methinks, I have heard it said by the "professors" that there is "no medicinal treatment for pneumonia!"

GERMAN VERSUS AMERICAN DRUGS

At the Senate hearing on the chemical section of the new tariff bill, now pending before Congress, Mr. John F. Queeny, of St. Louis, made the significant statement, as quoted by *The Oil, Paint and Drug Reporter*, that in his opinion, if the bill should become a law it "would mean nothing more nor less than the delivery to German manufacturers of practically the entire chemical manufacturing industry of the United States."

Our people have been singularly indifferent to the growth of this branch of our own industry. The expansion of German trade in chemicals in America has been tremendous, while American growth has been relatively very slow. The reasons are not hard to find. In Germany the chemical industries are encouraged all along the line. It has cheap alcohol, which we could not secure (because of Congressional opposition or apathy) until very recently; it has the cooperation of the finest state-supported system of technical education in the world; it has government encouragement, at home and abroad; and the German people are persistently trained, as a matter of racial pride and love of fatherland, to purchase and use German products whenever and wherever they are obtainable. Their attitude is well illustrated by the "ten commandments," a copy of which is given to every German employe and posted in every German business house the world over. They read as follows:

"1. In all expenses keep in mind the interests of your own compatriots.

"2. Never forget when you buy a foreign article that your own country is thus made poorer.

"3. Your money should profit no one but Germans.

"4. Never profane German factories by using foreign machinery.

"5. Never allow foreign eatables to be served at your table.

"6. Write on German paper, with a German pen and German ink, and use German blotting paper.

"7. German flour, German fruit and German beer alone can give your body true German energy.

"8. If you do not like German malt-coffee drink coffee from German colonies.

"9. Use only German clothes for your dress and German hats for your head.

"10. Let not foreign flattery distract from you these precepts, and be firmly convinced, whatever others say, that German products are the only ones worthy of citizens of the German Fatherland."

Our own attitude toward American enterprises does not look very well when compared with the preceding. Every new Congress tinkers with the tariff, nor is legislation generally of a character to encourage Americans to invest heavily in chemical manufacturing plants. Our patent laws help the German drug-maker, and put an effectual quietus upon American initiative; while American citizens are peculiarly indifferent to the interests of other branches of industry than the ones in which each man has a pecuniary investment. The German manufacturer seems to be able to put anything over in America—as when he sells phenacetin to the American doctor and druggist at five times the price he charges for acetphenetidin (see a recent number of the *J. A. M. A.*), which is an identical product. In selling the latter substance he comes in-

to competition with American chemical houses!

We need an American "ten commandments," which should receive as wide publicity and secure as loyal support as those the Germans have adopted. The Germans keep their money at home, and, through their loyal trade support and mutual and state encouragement, have placed their nation industrially at the top. Cooperation beats muckraking every time.

This world o' God's is brighter than we ever dream or know;
Its burden's growin' lighter, an' it's Love that makes it so!
An' I'm thankful that I'm livin' where Love's blessedness I see,
'Neath a heaven that's forgivin', where the bells ring "Home" to me!

—Frank L. Stanton.

A CONTRAINDICATION TO THE ADMINISTRATION OF ANTITOXIN

Almost every physician having occasion to administer antitoxin serum frequently has seen more or less serious symptoms follow the injection in individuals who months, or even years, previously have had serum injected. As it seems desirable to be able to determine in advance those cases in which a second administration of serum will precipitate dangerous anaphylactic manifestations, Dr. W. L. Moss, who writes on this subject in *The Journal of the American Medical Association* for August 27 (1910), conceived the idea of making use of a local cutaneous anaphylactic reaction recently described by Knox, Moss, and Brown, which indicates hypersensitiveness in rabbits to horse-serum.

Dr. Moss applied the test in thirty cases in the following manner: The skin of the nonhairy, inner side of the upper arm is cleansed with alcohol and dried with a sterile sponge, then 0.01 Cc. normal horse-serum, preserved with a few drops of chloroform, is injected intradermally. A hypodermic syringe divided into hundredths of a cubic centimeter provided with a fine needle is convenient for this purpose, and undiluted serum should be used.

A positive reaction consists usually in the appearance of an area of inflammation 1 to 2 cm. in diameter, which comes on within twenty-four hours and disappears in two or three days. It sometimes happens that the entire reaction is over in twenty-four hours, so that an observation should be made at the end of about ten hours after the injection. The reaction is purely local, at the site of injection, and in no case have any constitutional symptoms or discomfort resulted.

In case of negative results, nothing is observed except perhaps the needle-prick, and if care be taken to introduce the needle sufficiently superficially, even this may not be found.

Of the thirty individuals tested, 9 had never received any form of antitoxin, and all of these nine gave a negative reaction. The remaining twenty-one individuals had received antitoxin from four months to ten years previously. Of these, 10 gave positive reactions and 11 negative. The result does not seem to depend upon the length of time elapsed since the injection of antitoxin, since the positive and negative reactions were about equally distributed as regards the time-interval.

It is hardly to be expected that all ten of the patients giving a positive skin reaction would develop serious anaphylactic symptoms should they receive another therapeutic or prophylactic dose of antitoxin, but of the ten positive reactions, especial attention must be called to three which differed markedly from the remainder. These set in with explosive suddenness, one at the end of about six hours, another after about eight hours, the third after about twenty-four hours.

In these three cases, immediately surrounding the site of injection, there suddenly appeared an urticarial wheal about 1.5 cm. in diameter and surrounding this an areola of inflammation about 5 to 6 cm. across. The appearance of the reaction was accompanied by marked itching, but no other manifestation. These three reactions subsided as the others did, except, perhaps, in less time. It would seem that reactions of the nature just described might indicate danger from any further injection of antitoxic serum.

The author suggests that wherever a delay of twenty-four hours is permissible

before the injection of antitoxin, this test be performed, if the patient gives the ordinary positive reaction, and the indication for antitoxin is very slight, it might be safer to withhold the antitoxin, but if the indication is fairly strong the patient should receive the injection.

When it has finally been settled by the pessimist, academically, that the patient must die—that nothing more can be done—then watch some therapeutic optimist, one who knows how, and knows why he knows, take hold and do the "impossible." Never give up!
—Abbott.

PROFESSOR ELLINGWOOD'S PAPER ON TYPHOID FEVER

An article which is packed full of useful ideas that can be utilized for the patient's benefit and the doctor's glory, and appearing elsewhere in this number of CLINICAL MEDICINE, is Professor Ellingwood's contribution on "The Dietetic and Medicinal Treatment of Typhoid Fever." Everybody should read it. Substitute the active principles for the fluid uncertainties—bryonin for bryonia, aconitine for aconite, gelseminine for gelsemium, atropine for belladonna, and so on, all through—and we can heartily endorse practically every one of the suggestions made. In the beautiful adjustment of remedies to ends, to meet the modifications of function, small and great, occurring in every case of typhoid fever, the Professor's advice stands out as clearly cut as a cameo.

Of course we do not agree with Professor Ellingwood in every respect. For instance, we feel that he has not emphasized with sufficient forcefulness the importance of intestinal antisepsis. This has long since passed the experimental stage. It is fundamental, essential—its value demonstrated in the treatment of thousands of cases. The fact that the typhoid bacilli may have penetrated into the blood before an attack upon the intestinal flora was begun is a minor consideration. The bowel is the original nidus of the disease; here are the ulcerated surfaces—the demonstrable evidences of disease; here the bacteria grow most readily and develop most profusely; here, also, the contributory bacterial poisons, which do so much to undermine the patient's resistance, are formed with greatest rapidity and in largest quantity. The bowel is the seat of the disturbed balance, the persistence of which makes for a severe or long-drawn illness, the restoration to normal meaning rapid recovery. This is the one absolutely essential point of attack. The necessity for clearing it of irritant toxin-producing material, and keeping it clean, is almost self-evident. It is for this reason—these reasons—that we have advocated the use of the sulphocarbolates with much confidence, a confidence justified by results, during the last twenty-five years.

Dr. Ellingwood does not praise echinacea a bit too strongly. This remedy should be used in every case of a socalled "septic" character—indeed, in all severe cases. In such cases we have come to use it in connection with or in alternation with calcium sulphide. These two drugs combat the blood infection perhaps better than anything else as yet available.

But read all of Professor Ellingwood's paper. You will enjoy it.

A WASTED OPPORTUNITY

When a man ceases to advance he has already begun to go back. Bryant's man who "wrapped the drapery of his couch about him and lay down to pleasant dreams" was dead. Many men are ready to do that same dignified stunt now, without waiting till dying-time. They feel that their knowledge, their progress, their beliefs and their methods of practice—their science and art, in fact—are complete, and nothing more is to be added. They might just as well die, but to this they object strenuously.

Just as strenuously do we dissent from many of the tenets of the day. We deny that drug therapeutics is a finished and worn-out method, fit only for the discard. We deny still more earnestly that clinical observation is unreliable, and of too little value to be taken seriously; and that nothing should be admitted in medical courts but testimony founded on the mathematic usages of the laboratory. Mathematics furnishes us a line of facts whose proof is so complete that there can

be no question. No other line of reasoning gives similar certainty; but the things susceptible of such demonstration are so few that the man who limits his beliefs to them is like the person who tries to live on absolutely pure food—that has never had the possibility of dirt; he must confine himself to boiled eggs and nuts!

Our contention is that all the experimental data supplied by the laboratories are simply valuable as giving indications for further experiment in that last and most valuable of the laboratories, the clinical—the sick-room. The difficulty here is that we can not always distinguish between sequences and consequences; and that our material effects are so commingled with psychic influences that it is not possible to separate them mathematically.

But suppose one doctor gives a drug and notes an effect. He gives that drug in other cases of the same description and the effect follows invariably; of course the proof is strengthened. If one hundred doctors do the same thing and get the same result every time, the proof is so strong that the burden of evidence to the doubter rests on the latter. Clinical testimony therefore grows stronger with the number of cases and of observers.

This matter as regards therapeutic agents is of vital importance to the doctor. He must know what his remedies are capable of doing when given to patients stretched on the bed of sickness. What the drugs did when given to dogs is of less moment, and only interests him as suggesting a possible effect when administered to man. What the drug does to a well man is also of indirect interest, because he wants to know what it will do to this particular sick man.

Here is where our shocking waste comes in. We have in more or less direct affiliation with CLINICAL MEDICINE many thousand physicians. Therapeutic suggestions are presented to this enormous number monthly; and innumerable numbers of statements are made in the great cyclopedic "Textbook of Alkaloidal Therapeutics." Which of them are found true on clinical trial? Which are only measurably true, under certain circumstances, as to age, sex, climate, season, and other modifying elements? *You people know, but you don't tell us.*

Now and then we meet one of you, and dig out some items that are so meaty that we feel like shaking you because you keep them to yourselves.

When the first edition of our textbook was prepared we had a special form made with blank interleaves, so that doctors could make notes opposite items they tried, and thus add their experience to the work. Not one of these has ever come back to us. If anybody has kept such a record he still keeps it—to himself.

Much of the data given in such a work are necessarily tentative. No one man ever had such a huge practice that he could try out everything comprised in a whole materia medica. But each one has some, and the aggregate forms a body of facts of priceless worth. The author of such a book gathers the best available materials where he can. He supplies the results of his own observations, and his knowledge of the other authorities governs the weight he places on their assertions.

Take alnuin. Its admission was due to a statement made to the author that a tea made from the fresh bark was effectual in removing blemishes from the skin, leaving the complexion clear and of waxen purity. Very desirable for the ladies and valuable as indicating the complete elimination of waste matter that make a bad skin. But does alnuin do this? Frankly—I don't know. It has seemed to do so in a number of cases, and the fair patients seem contented to take it; but our laboratory has investigated alnuin and failed to find in it alkaloid, glucoside, neutral principle, resin, or any other active principle. It can't be active unless it contains some sort of active principle, can it?

I had about concluded that the effects of the fresh bark were due to a volatile oil that was dissipated while drying, and that the concentration, alnuin, was inert, and the supposed benefit to be credited to the hygienic rules I had laid down, when in comes a New York City physician, in whose judgment I have great faith, and says he has had excellent effects from the

alnuin granules! He gave five granules in a cup of hot water four times a day—before meals and on going to bed. Kept it up for a month.

Won't those of you who have lady patients who would like a clearer complexion try this out, and tell us? Just put your report on a postal card and send it in to the editor.

The quiet work of the practising physician—often extending over twenty-four hours a day—saves your babies, rich and poor, and keeps the specialist and his bone saws, and clamps and dazzling operations in the background.—A. Jacobi.

A HEAVY BURDEN

Dr. Gram of the Bureau of Vital Statistics complains that people object to their physician notifying the authorities of the existence of contagious diseases, and thus the peril of transmission is increased. But "if the physician insists on treating diphtheria by up-to-date methods—culture, antitoxin, isolation and quarantine—he always saves his patient, is dubbed an 'alarmist,' gets no credit as a life-saver, but instead wins the undying hostility of the parents."

That is sad. Dr. Gram sees one side of the question, but there is another. Many years ago the writer attended a mild case of scarlet-fever. The total expense to the family was five dollars—four visits, and less than a dollar for medicines. The child recovered, with no sequences. No known contagion occurred from the case.

Recently a neighbor's child had an attack of the same malady about of the same grade. The family were quarantined, a trained nurse placed in charge, and the total expense was not under $500. Rather a high price to pay for "modern methods," but perhaps not too high if the family had the means. But what if they did not have the $500? There is no law to compel people to have that much loose money; men making up to $35.00 a week are not objects of charity, and yet they can rarely spare fifteen weeks' salary for a mild case like that, the household expenses going on meanwhile as usual.

That this warrants the exposure of the community to contagion we do not contend; that it explains and in part excuses the antipathy of the people to "modern methods" we do believe. Let these be restrained within the reasonable limits and there will be far less disposition to favor the practicians who ignore the law in their patrons' interests.

A CASE OF ACTINOMYCOSIS

We see, by the Fort Collins (Colorado) *Evening Courier*, that a case of actinomycosis (or "lumpy-jaw", as it is called when the disease occurs in cattle) was brought for diagnosis to our friend Dr. B. F. Kaupp, pathologist of the Colorado Agricultural Experiment Station, by Dr. McCarty, of Berthoud, Colorado. The patient was a boy of unstated age, and the microscope clearly showed the presence of the ray fungus.

Actinomycosis is a rather rare disease in the human patient, but quite common in cattle, and occasionally found in pigs. According to Osler, Erving had been able to learn of only 100 cases in America prior to 1902. In Europe it is much more widespread than in the United States. It is usually transmitted to the patient by mouth-contact with some infected substance, often by straws used as toothpicks. This was the source of trouble with Dr. McCarty's patient. The straw probably produced a slight trauma of the gums or infected a carious tooth, so that this locality became the seat of the trouble. In this connection it is interesting to note that Lord has shown (*Boston Medical and Surgical Journal*) that in practically every decayed tooth or diseased tonsillar crypt there are ray-like bodies closely resembling the streptothrix.

The disease usually attacks the jaw, giving rise to a tumor-like growth of a chronic character, which may simulate sarcoma. Finally suppuration occurs, and there is an associated fever, which depends largely upon the presence of pus. The fungus may also attack other portions of the body, the tumors being found frequently in the lung, in different portions of the alimentary canal (the appendix, for instance), occasionally in the liver, once in

a while in the skin, and rarely in the brain. As a matter of fact, the streptothrix, the infecting agent, may become seated almost anywhere in the body. Probably on account of the frequency of pulmonary complications, cough is a fairly constant symptom, and the disease is thus often incorrectly diagnosed as tuberculosis. The diagnosis is easily made by the microscope, if the tumor-tissue is accessible.

According to Osler, recovery from actinomycosis is very rare, yet Maier has recently reported (*Beitraege fuer Klinische Chirurgie*) many cures in cases which he has tabulated. In 56 of these cases, treated with an iodide alone, there were 34 recoveries; in 94 with operation, there were 75 cures; in 109 with excision, plus the iodide, there were 60 cures; and in 30 with other forms of treatment, there were 25 cures. Tuberculin proved curative in one case, and Maier thinks this remedy deserves further trial.

Sodium iodide was used by this author, who gave 15 grains the first day, 30 the next and 45 the next; then, after three days of rest, the same course is repeated. This medication may be continued for a considerable period. Potassium iodide solution (10 percent) is applied to the growths when they are accessible. The tumors are removed when the locality will admit of surgical intervention.

These cases, while rare, are always interesting and every physician should keep them in mind when confronted with a tumor-growth on the jaw or one associated with an atypical resisting cough which does not respond to the usual tests for tuberculosis.

How many readers of CLINICAL MEDICINE have seen cases?

Here is what a physician given to epigram recently said about the care of the consumptive: "It is more important to empty the bowels than to fill the stomach." This wise saying may with equal felicity be applied to nearly every other disease. "Clean out, clean up and keep clean."

WHOLLY GRATUITOUS

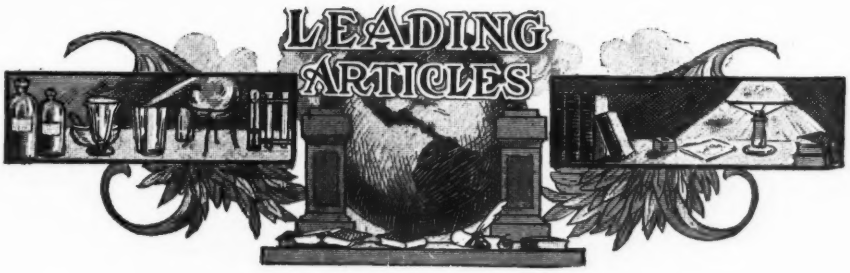
Sometimes people go far out of their way to affront others, when they could just as well and better have kept along in the straight road without hurting themselves a whit.

The Monthly Therapeutic Topics, gotten out by the C. R. D. A., for February contains some excellent material, well calculated to promote the objects, which are, as stated, "to exploit the standard and official preparations of the United States Pharmacopeia, and the National Formulary, and expose fraudulent and misbranded drug products." But then they upset the whole kettle of milk by inserting a wholly unnecessary slap at the "fallacy of active-principle medication." In this they declare that senna, rhubarb and frangula contain glucosides that can not be separated and administered singly with success.

Will the C. R. D. A. kindly inform us who wants to do so, or has proposed to extract these principles and administer them singly? We had not heard of any such proposition. Is it meant to be inferred that the C. R. D. A. therefore objects to the use of all active principles? Morphine, strychnine, quinine, atropine, hyoscine, and the ten or more others that are listed in the Pharmacopeia? Or emetine, berberine, and others that although not yet listed have been approved by the Council? If not, please tell us just what you do mean.

Those who advocate the use of active principles do so whenever one has been extracted and tried out so as to show that it has distinctly valuable applications. Whenever any drug is not represented by a single active principle, or when there is a better preparation we advocate whatever we think is best. Senna and frangula do not appear in the alkaloidal lists, and rhubarb occurs as a purified extract, the smallest bulk into which this valuable drug can be squeezed without sacrificing its virtues.

These things seem to worry people who would like to hold us up to ridicule as under all circumstances advocating alkaloids and nothing but alkaloids. That would enable them to classify us as exclusive sectarians, and to open on us their heaviest artillery. But since we never have occupied that position they are completely out of range—and don't like it a little bit.



Our Shifting Issues in Medical Ethics

How We Can Regulate the Commercial Evils Influencing Medical Journalism, Proprietary Customs and Medical Practice

By EDWARD A. AYERS, A. M., M. D., Branchville, N. J.

MEDICAL practice is primarily an altruism, a relationship between doctor and patient similar to that of father and son in a business partnership; commercially ruled in the formal *quid pro quo* of necessity; yet ever distinctively on a higher plane than the trades' moral rule of simple economic equity. It demands a humane paternalism even beyond that of the Golden Rule.

To hold pathic relief in higher esteem than the making of a fortune out of practice should and must prevail in every conscientious doctor's mind. The practitioner is the sole defender of this altruistic standard. The collaterals of practice: advertising, drug and instrument sales, publication sales, sanitarial keep of the sick, and all insincere fake systems of practice are pursued along the trade-rule standard of money-making. The solely commercial pressure of these interests is as constant as that of water behind the faucet in a high-pressure system. The moral and equitable balancing of the interests of the sick against the interests of these commercial interests is largely left to the practitioner—and, incidentally, to such statutory restraints and public influence as he and others may have engendered.

There being an innate war between the interests of the sick and those of commercial exploiters, we will find that no statutory laws or rules of organizations (ethical codes) can rival in the restraint of these solely money-making interests a system of practice—in the economic, not the pathologic sense—that is innately automatic; that best makes the commercial as well as the scientific interests of the practitioner identical with the patient's interests. The "right to make a living" may not justify the methods of many of these commercial interests, and the lack of such justification will not check them; but if the opportunity be removed, no moral castigations are required. Can we find such automatic regulators?

Are There Automatic Regulators of Trade Ethics?

In medical journalism there are two innate influences that alloy the pure gold of medical altruism: advertising for the money there is in it, and medical writing for the advertising there is in it. Remove these, and many of our medical publications would cease. But secure their proper constraint, and they can justly continue. Constructive criticism should outrank destructive criticism. Let us imitate physiologic nature, which uses constructive as well as destructive ferments, though we were long in discovering the latter. When the subscription income of a journal is a small percentage of the advertising income, the latter's influence holds the life of the journal in its grasp. The publisher is not

technically responsible for the merits of things advertised, and could not correctly assay many, although he is unexcusable in providing space for known fraudulent matter.

However, the practitioner is morally responsible for administering any "remedy," and if his license to practise is scientifically justified, he should be able to judge for himself, and morally must judge for himself, before administering any article at the suggestion of any other man.

Moral: Let the publisher insist upon printing the exact formulas of remedies advertised. The responsibility is then rightfully upon the practitioner. The protest of the owners of proprietaries that it is not fair to ask them to publish the formulas—thus to give away their trademark franchise—may hold a commercial-code justification; but as its insistence is against the rights and responsibilities of practitioners and against the ultimate interests of the public, they must make the sacrifice if our profession does its duty.

Proprietary-remedy interests are fast becoming a real cause of subversion of the pure strain of medical practice. They seem about to occupy the patent-medicine field as fast as the latter class of exploiters is driven out. That the money rewards of "specialty" trademarked products stimulates originality and pharmaceutical improvement is their main excuse for an approving recognition, seems a fair statement. Their harmful tendencies are: to exaggerate their values, warp the judgment of the practitioner, unnecessarily duplicate remedies, gradually corral the established drug combinations, and to use practitioners as tools for getting such articles ultimately directly to the public independently of the practitioners. If such consequents worked an improvement of public interests, the practitioner could hold no claim of "right to make a living," which is, of course, an absurdity.

Does Professional Incapacity Favor Multiplication of Proprietaries?

Inspection of retail-druggists' prescription records easily shows that an extraordinary number of doctors' prescriptions are for proprietary remedies and generally give the trademark name instead of the article's formula. Is this remarkable shift from scientifically established nonproprietary formulas evidence of the scientific preference of practitioners for proprietaries? I cannot believe that. Is it not rather due to ease of writing a trademark name instead of a formula; to constant exploitation that keeps proprietaries actively in mind; and especially to the limited capacity of practitioners in writing correct prescriptions? The number of practitioners who can write an extensive list of correct formulae, whose ready *repertoire* is equal to their needs, is probably small.

Calls for greater efficiency in prescription writing and appeals to practitioners to hold keener regard for the interests of themselves and of their patients have their place, but they will not suffice in checking this very grave evil. Can we add to these a method that will not only succeed in keeping control where it morally and scientifically belongs but likewise subserves the just rights and interests of the proprietary owners?

The Advantage of Self-Dispensing

Twenty-five or thirty years ago prescription writing and retail-drugstore compounding were largely a necessity. Today the preparation of remedies by the wholesale drug houses makes it feasible for every practitioner to carry in stock nearly every form of preparation his most careful study could include. If not, he can readily have it provided. In dispensing these remedies himself, the doctor can do it in less time than he can write a prescription—and in the vast majority of cases offer a truer choice, while saving for his patient both time and money. If this reduces retail-drugstore business, it does not become a just argument against it, any more than in the analogous case of automobiles and livery horses.

At present wholesale drug houses seek development of specialties, along with standard articles, and exploit them with unscientific bias, even, in some cases, offering rewards to agents selling the largest amounts of such specialties. With the

bulk of drug dispensing in the practitioner's own hands, there will be no influences leading him to a preference for proprietaries and specialties, and the wholesale houses will find their one fundamental line of interests lying, not in trademarked articles, not in biased selective exploitation, but in best supplying the tablets, pills, mixtures, and what-not that find their demand originating in bedside need and proven worth.

Are not, then, the innate influences of such a self-dispensing system automatic in leading to the best interests of all—a constructive ferment?

Composition of Proprietaries Should be Stated

The publication of the formulas along with advertisements of proprietaries should not injure sales of a good article—and a bad one ought to be killed off. The medical publisher can more freely and conscientiously open his advertising pages when the formulas are given. Lauding adjective will not override merit or demerit with the intelligent professional reader. The advertiser will be given freedom that will permit an open hearing, but prove a boomerang if his article is unworthy. Publication of offers of discounts for orders from physicians should not be permitted, nor of testimonials until proven true.

Our present laws and medical-school standards should evolve doctors competent to judge the merits of articles by their formulas. I favor a law making simultaneous publication of the formulas of all advertised remedies compulsory. Put the safeguard of the patient where it belongs—upon the practitioner; and put the responsibility for licensing only competent practitioners where it belongs—upon the state; but assist the physician by making full formula knowledge as accessible as exploitation.

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[We are glad to have the opportunity of placing Dr. Ayers's article before our readers, because it presents the problem of the proprietary remedy in a rational way and in a judicial spirit. This problem can never be resolved by philippics against manufacturers, so sensationally presented, in a manner characterized by personal or professional bias, and so saturated with antagonism, as to make it appear that these specialty-drug makers are dishonest, designing men with but the single purpose of making money—no matter how. You know, and I know, that (while there are "black sheep in every flock") these men are generally clean-thinking and square-minded men—but, of course, liable to make mistakes.

As to the proprietaries, they have had their place. While many (perhaps most) of them are doubtless doomed to extinction—and deservedly so—we should not forget that a very large percentage of the pharmaceutical preparations now officially recognized in the pharmacopeias of this country and of others, were originally proprietaries. We need only think of Dover's powder, brown mixture, Hoffman's anodyne, compound cathartic pill, and kaolin paste, to recognize the truth of this statement. As for the National Formulary, it is the final stage in the existence of the good proprietary—its reincarnation into a better (?) life!

The misuse of the proprietaries, as Dr. Ayres so clearly points out, is distinctly an evidence of the extremely defective character of the instruction in the use of drugs provided in our medical colleges. Physicians use these things because they are not taught how to use the right drug, the indicated drug; because they do not understand pharmacodynamic action; the reaction of the human organism to the various remedies; the adaptation of dosage and the combination of indicated remedies to produce the desired ends. From our point of looking at it, this is also due, in part, to the failure to teach that the drug should first of all be an exact and dependable one—that the active principles should be used whenever possible.

We are also tempted to add—yes, we will add—that the medical schools which err most in this *practical* instruction in therapeutics are those which pretend to most science. The laboratory methods of instruction are excellent, they are the coming methods, but at present they are dominated by theorists, whose learning is

unquestioned, but whose practical familiarity with the problems of *treating* disease leaves much to be desired.

We agree with Dr. Ayers that the man who will use drugs most intelligently is the one who will administer them himself, at the bedside. One can only attain the maximum practical knowledge of medicinal remedies by giving them himself, handling them, smelling them, watching their action, from dose to dose perhaps. This leads to exactness—it draws a man away from polypharmacy, leading him to closer individual study, if he is a really honest, thoughtful, progressive physician.

We also agree with Dr. Ayers as to the method of presenting proprietaries through the medical press. Their makers have a right to be heard; it is neither fair nor right to suppress them with a bludgeon—even if that bludgeon has "Authority' written in large letters upon it. But the proprietary should be presented honestly. Dishonesty in advertising should be discouraged. The composition of every such remedy should be given in every advertisement, or at least be readily available. Enough such information should be provided so that an intelligent physician can draw his own conclusions. As to the merit of such a remedy there is but one test—that of clinical experience.

We long ago stated our position upon this subject. In 1906 we printed the advertising platform which follows, and which for many months was carried at the head of our advertising department. While the detail has varied from time to time since, we have endeavored to adhere continuously and consistently to the principles here laid down:

"1. Remedies advertised to the laity will not be admitted; this rule, of course, not excluding food preparations, soaps, harmless cosmetics, simple laxatives, ointments, and other substances not intended primarily for the treatment of disease.

"2. Palpable falsehood, purposely misleading or grossly exaggerated statements concerning the composition or alleged virtues of a remedy will be considered sufficient cause for the exclusion of advertising.

"3. The names of the essential remedies of therapeutic value entering into any compound, and the quantities of any toxic or habit-forming drugs must either be given by the advertisement, or the advertiser must agree to furnish them to any physician upon request." To this we now would add that the quantities of every potent constituent in a combination should be given, that the physician should know exactly what he is giving, so that he may know exactly what to expect.

To these rules we adhere today, and we take this opportunity to reiterate them. We stand with the best in the fight for better drugs, truer drugs, a cleaner and more effective materia medica. Our fight for the active principles seems to be proof enough of our position. But we also stand for a campaign that is first of all *constructive*, and which in its zeal does not go to the extent of destroying that which is good or of handicapping or abusing those who are honestly endeavoring to give the medical profession honorable, helpful service.—Ed.]

THE day is this, the time is now;
No better hour was ever here—
Who waits upon thee when and how
Remains forever in the rear.
Though yesterday were wasted stuff,
Your feet will still seek out the way.
Tomorrow holds not time enough
Make this a day.

Professional Tact and Business Sagacity

By J. J. MULLOWNEY, M. D., Peking, China

EDITORIAL NOTE.—Dr. Mullowney is a medical missionary in China, which is again the scene of internal strife. While at present China is not exactly a healthy place for a white man, it is none the less a good place for the American doctor who has faith and courage, and is moved by the high ideals pointed out in this paper, ideals which should influence every physician, whether he be a "missionary" or not.

EVERY medical man discovers sooner or later that the practice of medicine has two sides—a greater scientific side, and a lesser, but important, personal side—and that to fight the battles of life successfully it is as necessary for even the most scientific physician to possess a certain amount of personal tact and business sagacity as it is for a ship to have a rudder. There are gentlemen in the ranks of the medical profession who are well acquainted with all the scientific aspects of medicine and can tell you what to do for almost every ailment that afflicts humanity, who, nevertheless, after earnest trial, have failed to achieve reputation or acquire practice simply because they are deficient on the personal side, in that they lack the professional tact and business sagacity that would make their other qualities successful; and there is nothing more pitiful than to see a worthy aspirant, deficient in these respects, waiting year after year for practice and a consequent sphere of professional usefulness that never come.

The Important Equipment

We know that to attain the scientific equipment which is to fit us for our profession we must study under teachers and professors, and learn through the books and experiments of the great leaders in medicine of the past and present ages. But to attain this personal equipment is not so easy. For the most part, it must be innate in the man; it does not come through book-study, and indeed there are but few books on the subject to guide the young physician. However, there are two books from which I have received much help myself along these lines, and I recommend them to those of you who contemplate entering the great and noble profession of medicine. One is "The Physician Himself," by D. W. Cathell, and the other is a book of essays by the greatest leader in medicine today, entitled, "Æquanimitas," by William Osler. If I have any thoughts that are worth your notice on this subject, I have got them from these two books, besides what I profited from the life and teachings of some of my preceptors at Harvard and the University of Pennsylvania.

First, last, and in the midst of all, those of you who are contemplating entering this philanthropic profession as men and as physicians, found your expectations of success on your personal and scientific qualifications, and *keep whatever is pure, whatever is true, whatever is just foremost in your minds, and be governed by it.* If you do not, you will not deserve to succeed in the honorable profession of medicine, and no honest man can wish you success.

Industry and Determination

Whenever and wherever you attempt to start private practice, you should, above all else, be seriously in earnest and strive to begin right, and, by the aid of tireless industry and determination, to enter promptly on the road to success; for, unless you gain popular favor by a display of ability, acquire a favorable reputation, and build up a fair practice in your first ten years, the probabilities are that you never will. In the battle of life it is not simply the events of school-days and college-hours, but the after-performances in the broader arena of life that prove the physician:

> "Life is a sheet of paper, white,
> Whereon each man of us may write
> His word or two—and then comes night."

It is no idle challenge which we physicians throw out to the world when we claim that our work is of the highest and noblest kind, not alone in the curing of disease, but in educating the people in the laws of health and in a knowledge of the spread of plagues and pestilences, nor can it be gainsaid that of late years our record as a world-wide body has been more encouraging in its practical results than those of other learned professions. Not that we all live up to the highest ideals; far from it—we are only men. But we *have* ideals, which means much; and these ideals are realizable, which means more. Of course, there are those among us who serve for dollars, whose ears hear only the lowing of the oxen and the jingling of the gold, but these are the exception. The rank and file labor earnestly for the good of humanity, and self-sacrificing devotion to fellowman animates the noblest minds of our profession.

A Tribute From One Who Knows

Robert Louis Stevenson wrote these words: "There are men and classes of men that stand above the common herd: the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarer still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only to be marveled at in history, he will be thought to have shared as little as any in the defects of our period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practise an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage. So that he brings air and cheer into the sick-room, and often, though not as often as he wishes, brings healing."

That is a grand tribute to our profession, by one who ought to know the virtues and the frailties of the men who compose it, for he was an invalid and under their care most of his life. Would that we could all live and work in such a way as to be worthy of such a tribute. Let us use it as an ideal for which we shall constantly strive.

The Great Gifts of a Great Century

The processes of disease are so complex that it is excessively difficult to search out laws which control them, and, although we have seen a complete revolution in our ideas, what has been accomplished by the new school of medicine is only an earnest of what the future has in store. *The three great advances of the century have been: a knowledge of the mode of controlling epidemic diseases, the introduction of anesthetics, and the adoption of antiseptic methods in surgery.* Beside them, all others sink into insignificance, as these three contribute so enormously to the personal welfare of the individual.

In the fulness of time, long delayed, long expected, at last science has emptied upon the sons of men the horn of blessings so manifold that they can not be enumerated, blessings which have made the nineteenth century forever memorable and which have followed with a rapidity so bewildering that we know not what to expect next. To us in the medical profession, who deal with all sort of people and measure progress by the law of greatest happiness to the greatest number; to us, whose work is with the sick and suffering, the great boon of this wonderful century, with which no other can be compared, is the fact that the leaves of the tree of science have been for the healing of the nations. Measure as we may the progress of the world—materially, in the advantages of steam, electricity and other mechanical appliances; sociologically, in the great improvement in conditions of life (and these are now coming to you [us], here in China, too, and with them will come immense problems for you [us] to solve); intellectually, in the diffusion of education; morally, in a possibly higher standard of ethics—there is no one measure which can compare with the decrease of physical suffering in man, woman, and child stricken by disease or accident. This is the one fact of supreme personal import to every one of us. This is the Promethean gift

of the century to man. In the words of the poet Shelley:

"Even where the milder zone afford man
A seeming shelter, yet contagion there,
Blighting his being with unnumbered ills,
Spread like a quenchless fire; nor truth availed
Till late to arrest its progress, or create
That peace which first in bloodless victory waved
Her snowy standard o'er this favored clime.
* * * happiness
And science dawn, though late, upon the earth;
Peace cheers the mind, health renovates the frame;
Disease and pleasure cease to mingle here,
Reason and passion cease to combat there;
Whilst mind unfettered o'er the earth extends
Its all-subduing energies, and wields
The sceptre of a vast dominion there."

The Physician's Foes

The physician, like the Christian, has three great foes: ignorance, which is sin; apathy, which is the world; and vice, which is the devil. There is a delightful and forceful Arabian proverb, two lines of which run: "He that knows not, and knows not that he knows not, is a fool. Shun him. He that knows not, and knows that he knows not, is simple. Teach him." To a large extent these two classes represent the people with whom the men in the medical profession have to deal. Teaching the simple and suffering the fools as gladly as human patience will let us, we must fight the wilful ignorance of the one and the helpless ignorance of the other, not with "the sword of righteous indignation," but with the skilful weapons of the profession.

Needs of and Opportunities in Small Towns in China

The physician needs a clear head and a kind heart; his work is arduous and complex, requiring the exercise of the very highest faculties of the mind, while constantly appealing to the emotions and finer feelings. *At no time has the influence of the modern medical man been more potent here, in China, than at present, at no time has it been so powerful a factor for good in this great empire.*

And I would here put in a plea for some of the smaller towns and villages in this great land. Do not be led away by the idea that you can attain honor and success only by practising medicine in the great cities. The history of the medical profession furnishes grounds for the statement that isolation promotes originality. Some of the most brilliant work has been done by men in extremely limited spheres of action, and during the past hundred years it is surprising how many of the notable achievements have been made by physicians dwelling far from educational centers—Jenner worked out his discovery in a village; McDowell, Long, and Sims were country doctors; Koch was a district physician. The Mayo brothers, the best-known surgeons in the United States today, have made their little village of Rochester, Minnesota, famous throughout all Europe and America. Do not despise the little towns, they are the bulwark of your nation. In them the physician can be a tremendous influence for good, physically, mentally, and morally; and in them he will often have that freeness from distractions which will allow him to give more time to study and for observation, such as he could hardly get amidst the excitement of a large city. Besides, your fellow countrymen in these smaller places need the presence of the modern trained physicians much more than do the city people, who can now, nearly always, find a hospital within their reach.

An Unspotted, Honorable Name

Now, one more word, to you who are contemplating entering upon the work of medicine. You cannot separate yourself as a physician from what you are as a man, and an unspotted, honorable name is the only thing that can render your life happy and enable you successfully to withstand the critics; for neither you nor any other physician can long lead a double life or afford to despise public opinion.

"A pebble in the streamlet scant
Has turned the course of many a river."

Unfortunate acquaintances have been the downfall, yea, the wreck and ruin of many a promising young physician. Therefore select your associates with great care, and do not fraternize with gamblers, politicians, chatty blockheads, or others whose time hangs heavily on their hands while yours is supposed to be valuable;

for you cannot retain your character as a physician if you allow yourself to be classed with such people. The public looks upon physicians as public characters—earnest, studious men, with scientific tastes, literary attainments, and correct habits, who have been singled out and set apart for a lofty purpose, and as socially, mentally, and morally worthy of an esteem not accorded to such people.

Would that each one of us that enters upon this ancient and highly honorable profession could each morning and throughout each hour of each day go at our work in the spirit of this prayer, which was made by a well-known English physician, the Dr. John Mason Good, over a hundred years ago:

O Thou great Bestower of health, strength and comfort! Grant Thy blessing upon the professional duties in which this day I may engage. Give me judgment to discern disease and skill to heal it; and crown with Thy favor the means that may be devised for recovery; for, with Thine assistance, the humblest instruments may succeed, as without it the ablest must prove unavailing. Save me from all sordid motives; and endow me with a spirit of pity and liberality toward the poor and of tenderness and sympathy toward all, that I may enter into the feelings by which they are respectively tried; may weep with those that weep and rejoice with those that rejoice. And (purify) Thou their souls as well as heal their bodies. Let faith and patience, and every (Christ-like) virtue they are called upon to exercise have their perfect work; so that in the gracious dealings of Thy spirit and of Thy Providence they may find in the end that it has been good for them to have been afflicted. (Grant this, O Heavenly Father, for the love of Him who, while on earth, went about doing good.*) Amen.

And then:

"When the Angel of the darker Drink
At last shall find you by the river brink,
And, offering his cup, invite your soul
Forth to your lips to quaff—you shall not shrink:"

Your "passport" shall be the blessing of Him in whose footsteps you have tried to tread, unto whose sick you have ministered, and for whose children you have cared.

*The words in parenthesis have been slightly changed from what they are in the original prayer of Dr. Good.—J. J. M.

THERE is but one straight road to success, and that is merit. The man who is successful is the man who is useful. Capacity never lacks opportunity. It can not remain undiscovered, because it is sought by too many anxious to use it.

—Bourke Cockran.

The Dietetic and Medicinal Treatment of Typhoid Fever

With Special Reference to the Use of American Vegetable Remedies

By FINLEY ELLINGWOOD, M. D., Chicago, Illinois.
Editor of Ellingwood's Therapeutist

EDITORIAL NOTE.—When it comes to the careful application of our vegetable remedies to meet well-defined indications there is no one of our acquaintance who excells Professor Ellingwood. This study of Typhoid Fever is a striking illustration of that fact. No reader of CLINICAL MEDICINE *should fail to read this paper.*

IT may well be considered an act of supererogation to prepare for THE AMERICAN JOURNAL OF CLINICAL MEDICINE an article on the treatment of typhoid fever, when the methods suggested by the editors and writers of this journal are so far in advance of those otherwise commonly adopted at this time; and, yet, a comparison of these measures with those of other successful physicians might not be unprofitable to both. I, therefore, present these suggestions in the line of medical treatment, omitting the preparation and general care of the patient, to a considerable extent, because this would naturally be the same with all prescribers.

Concerning the possibility of aborting an attack of typhoid fever, I would say that I greatly question whether it is possible immediately to terminate the disease when its etiological elements are implanted within the system and are enforced by a favoring environment. This question has been agitated for years and is still unsettled. Yet I am confident, that the avoidance of methods irritating to the gastro-intestinal tract and the adoption of the rational, specifically indicated treatment, with scientific care, and the avoidance of food for at least a day or two at the immediate onset or during the progress of the fever, as indicated, will greatly abate the course of the disease, modifying its manifestation and securing a very early termination of all its phenomena, if such a course be adopted from the onset in a positive and confident manner.

The Diet in Typhoid Fever

Concerning the diet of these patients, in my work on Practice written four or five years ago, I advocated an exclusive milk diet. I have since then been obliged to change my opinion on this point, or at least to modify it in relation to certain circumstances.

Notwithstanding the extremely urgent necessity, later in the case, for nutrition, I believe that, at the immediate onset of the disease, it is well to prescribe a period of fasting, the same depending upon the condition of the patient and upon its effects, varying from twenty-four to forty-eight hours, water alone being permitted during this time, and of that as much as the patient desires to take.

Professor John Uri Lloyd, in 1909, wrote some very excellent articles on the food-value of water, demonstrating from a scientific chemical basis that the nutritive power of water is much greater than that ordinarily attributed to it; that its tonic influence is above and beyond the simple influence of the supply of the liquid itself, in that its chemical elements are separated from each other and distributed within the system in a supportive and sustaining manner. The benefit of cold water in restraining the temperature is to be considered, also, although, perhaps, this might not be important, when the water is ingested only.

Milk and Milk Substitutes

I am not willing to say that there are no cases in which milk should be given. I am inclined to think that there are patients who might take milk to excellent advantage, all factors considered, if it should be prepeptonized. There is, as is well known, a class of patients in whom there is an early

deficiency in the acid constituents of the body-fluids, and these are almost immediately benefited by acid drinks such as buttermilk, matzoon or kumyss. These fluids are quickly received, are highly supportive, and exercise an immediate nutritional and tonic influence.

Where proper conditions do not obtain, we find that milk may increase the nervous and intestinal irritation; a marked and sometimes abrupt rise in the temperature may cause delirium and increase diarrhea and tympanites. This train of symptoms may result at certain times from the ingestion of any food, but by careful observation, by forgetting any previous routine or arbitrary course, and by adhering to the rule that *each individual patient is a law unto himself* and must be considered with reference to the exact conditions existing, every individual prescriber will find it comparatively easy to make a correct food adjustment for the patient under consideration.

These conditions occurring late in the course of the disease, after food has been resumed, make it necessary to discontinue food again for a short period. In greatly prostrated cases, even, after food decomposition is stopped abruptly and the intestinal tract cleared, the patients subsisting entirely upon water for a few hours, the benefits would be observed by an apparent restoration of the patient's strength.

I have obtained excellent results from the use of fruit juices, prepared, if possible, without sugar. Where the demands of the system show a necessity for the use of acids, acid fruits may be used freely and satisfactorily. Where the juices from the fresh fruit cannot be obtained, I have used diluted jellies. A teaspoonful or two of any jelly may be added to a glass of water, and to this may be added a small quantity of the peroxide of hydrogen, and this drunk *ad libitum*. These are acceptable to the patient, seldom disturb the stomach even in sensitive cases, seldom ferment, and they show evidences in nearly all instances of considerable nutritional power.

Where hemorrhage threatens, nutritive enemata may be depended upon instead of food *per os*. I have found an ounce of cream with a dram or two of bovinine, given every three hours per enema, to be a simple, effective measure; or, also, the white of an egg dissolved in water. Later, when the stomach will receive food, this may be given in frequently repeated small doses by the mouth, and where the prostration is marked and nutrition is immediately imperative, finely scraped raw beef may be administered.

Where convalescence occurs early and there is plainly an abatement of all the phenomena of the fever, and where ulceration of Peyer's patches has evidently not been severe, the patient may take an entire egg diluted, or thin custards, or a little well-cooked rice.

Give the Patient Ice-Cream

In 1885 I began the administration of ice-cream in fevers where I was confident that a milk food would be digested, and obtained such excellent results that I have made quite common use of this substance, ordering always that it be prepared, by the nurse, of fresh milk with a very little corn starch, and almost no sugar; usually, however, with eggs also. This I have found is received by patients gratefully, and to cause but little disorder of the stomach. During the high temperature and given in very small quantity intermittently, it takes the place of broken ice; and if there is a short period between each teaspoonful, it seems to assist in reducing the temperature, and it sustains the strength of the patient as well.

When the fever has been greatly protracted, the exhaustion is extreme, and the convalescence late, the use of eggs and raw meat, previously referred to, very carefully administered and correctly adjusted, will be of much service. There are cases in which lemonade or orange juice, iced and sweetened with glycerin, will be of much service.

When the nervous system suffers greatly and nervous prostration is very marked during early convalescence, the temperature abating, I have much confidence in the use of a rather unscientific combination, made of the tincture of red cinchona, 1

ounce; a very little tincture of capsicum, a few drops only, to restore tone to the glands and glandular organs; and about 5 ounces of bovinine. This is given, as if it were medicine, in teaspoonful doses every one and one-half, two or three hours, according to the receptivity of the stomach of the patient. I have seen such quick restoration from this that I am favorably impressed with it.

Care of the Mouth and Throat

A thorough cleansing of the mouth and throat with a saturated solution of boric acid, to which 20 drops of specific echinacea to the ounce is added, should be frequently made day and night. If the mucous membranes of the mouth and tongue are dry, a little glycerin should be added to this solution and used more frequently. The patient should be encouraged to drink freely of pure cold water throughout the entire course of the fever. If a tablespoonful of the peroxide of hydrogen be added to each quart of water, without the patient's knowledge, it will not be tasted in the water, and its influence as an oxidizing and disinfecting agent, steadily and persistently administered, will be of the most signal service in preserving a benignant form of the disease and in its ultimate abridgment. The use of a mild infusion of equal parts of marshmallow, epigea repens, and triticum repens, to which a little lemon juice is added, drank cold, will be very pleasant to the patient and will act as a most serviceable diuretic.

The use, in the earlier stage of typhoid fever, of alcoholic stimulants often is harmful. The commonly accepted opinion, that stimulants are necessary from the first, *is radically wrong*. Stimulants are indicated by exhaustion, and need not be given until the indications appear. Then a little good wine or diluted brandy can be given during that period when the temperature is the lowest, but I am positive that harm results when given during an increase of temperature. We may have recourse to remedial agents that are in every way superior to alcoholic stimulants. These will be mentioned in their proper order in this article.

When, in convalescence, fever has been absent about eight days, the ordinary diet may be very gradually resumed, due attention being paid to the manner in which the food is received within the gastrointestinal tract. Fresh vegetables have an especially rapid restorative influence when well digested, and fresh fruits in season are acceptable. The administration of an artificial digestive with the first solid food, and for the first few days, is an important precautionary measure.

The Medicinal Treatment

Preliminary to what I have to say concerning the use of drugs in the treatment of this disease, I desire to quote here a paragraph from my work on Practice, the truth of which has been confirmed in my own experiences—although I am aware that in some of its details many of the readers of this journal will disagree with me:

"It may be well to preface the suggestions to be here made with a caution concerning a fallacy which the profession has been in the habit of adopting in the past. A most notable error is the inauguration of the treatment of typhoid with the administration of an active dose of physic, and the continuation of laxative remedies during the course of the treatment. I am confident that the profession at large makes no greater mistake than this. Let good judgment and a keen, rational discrimination decide as to whether simple intestinal obstruction from any cause, or fecal accumulation be present. If these exist, a mild laxative, accompanied with a large high enema, will be sufficient in all cases. In an observation of nearly thirty years, I am convinced that large doses of calomel prolong the fever, and that this foreign substance, in any dose, may be readily substituted by a rational organic remedy. The old practice of administering an active emetic at the outset of the disease has become obsolete, although the stomach must be freed from any indigestible material."

From repeated inquiries I have made, I find that those who adopt a continued course of laxative medicine through the

course of this disease are gratified if the fever declines at the end of the fourth week and terminates in five or six weeks, without serious complications. Those who have persistently adopted the contrary course named above, with the use of echinacea, as hereafter specified, and occasional high colonic antiseptic flushings, expect a reduction of the temperature during the third week, with a complete disappearance of abnormal temperature, without complications at the end of that time, and a short, rapid convalescence.

Antiseptic Measures—The Sulphocarbolates

While typhoid fever is an infectious disease, and while we believe the port of entry of the bacilli is by way of the intestinal canal and through Peyer's patches, we do not get the pronounced direct results from intestinal antiseptics we would anticipate, because the bacilli and the resulting toxins are not active upon the surface of the mucous membranes; and after the bacilli penetrate the structure of these membranes, they have passed beyond our reach, and this before the fever appears. Much good is accomplished by this class of agents in preserving an antiseptic condition of the gastrointestinal tract.

The sulphocarbolates have an important influence when there are evidences of sepsis and decomposition of undigested food substances, especially if the mucous membranes are pale and the tongue is broad and thick and coated white. The sodium sulphite is administered at this time with good results also, especially if the coating on the tongue be dirty or yellowish-white.

The indications for acids in typhoid fever are plainly marked in most cases, but hydrochloric acid is of benefit in its influence upon the stomach and digestion when the usual indications of a deficiency of acids in the system are not plainly apparent. When the mucous membranes are deep-red and the tongue has a slight brown coat or a dry brown stripe down the center, this agent is indicated. But it may be given diluted after the food when there is extreme prostration at any time, if the body of the tongue be of a deep-red, even if there is a whitish fur on the tongue or if the papillæ are greatly elongated and tipped with white. It is especially serviceable in the early stages of convalescence.

I have mentioned the persistent use of hydrogen peroxide. I should further advise its use in all enemas and especially when diarrhea is present. Systematic and thorough lavage of the intestinal tract is an important feature of the treatment of typhoid fever. An enema, containing 2 tablespoonfuls of hydrogen peroxide in each quart of water, given after each bowel movement, cleanses the lower intestinal canal and assists in controlling further bowel movements. This is especially true in tympanites, also. If the latter condition be severe, a half dram of oil of turpentine should be mixed with the water and injected once each day.

Echinacea, and Other Useful Remedies

Echinacea has been extensively used in the past ten years, and, while it has not aborted the fever, it is the best of our agents in antagonizing the influence of the toxins within the system. It may be given in conjunction with any other indicated remedies in from 5- to 10-drop doses every two hours. All observers unite in the opinion that it greatly modifies the severity of every attack. It lessens the fever and materially shortens its course. But few cases continue beyond three weeks when this agent is used. It preserves the integrity of the blood, sustains the action of the heart, stimulates the stomach, encourages nutrition, and positively wards off complications and sequelæ.

Baptisia is indicated when the tongue is dry and coated with a brownish coat, when the mucous membranes are dark-colored, purplish or dark-red, and when the breath and fecal discharges are fetid and there is sordes on the teeth. It is a great favorite with those who have had experience with it. It should be given as soon as these indications appear.

Oil of turpentine is a remedy of importance when there is marked deficiency of the secretions of the mucous and glandular organs of the intestinal tract, and tympanites. If the tongue be very dry, pointed, and dark-colored, the oil may be given, in

the form of an emulsion, every two or three hours, in doses of from 2 to 5 minims. It may also be applied externally in the form of a stupe. From 1-2 to 2 drams, stirred thoroughly into an enema of very warm water and introduced through a high rectal tube, will remove the accumulated flatus of tympanites and give immediate relief.

In my opinion a most important consideration in every case must be the reduction or the restraining of the temperature. In sthenic cases, at the immediate onset of the disorder, if there be a pronounced chill, with greatly elevated temperature of abrupt occurrence, and especially if there be, as sometimes occurs, a wild delirium within the first few hours, it is excellent treatment to administer a full dose of jaborandi, or 1-12 of a grain of pilocarpine hypodermically; then to put the patient into a hot bath for a short time and, on removal, wrap him in blankets, thus encouraging profuse perspiration. I am confident I have seen attacks greatly abridged by this course. The sudden early occurence of violent delirium, in the sthenic stage, has no better remedy than jaborandi.

It is seldom, however, that the physician is called until the fever is well established. If there be a dark, flushed face, with full capillary circulation, a rapid, large, full pulse, then veratrum should be given in small doses every hour as long as this condition is present. But this is apt to change quickly. The skin will become dry, the face flushed bright-red, the mouth dry and parched, the pulse smaller and hard, yet rapid.

When Aconite is Useful

These indications demand aconite. Mix 15 drops of the tincture with 4 ounces of water, and of this administer 1-dram doses every hour. This agent, in rather full dosage, during the sthenic stage is of much benefit, and I am satisfied that in very minute dosage it may be continued into the asthenic stage, with only good results, from its restraining influence upon high temperatures, assisting also in the dissipation of heat. If there be with these latter indications a great degree of nervous excitability, with contracted pupils and muscular twitchings, gelsemium may be given in connection with the aconite or may be substituted for it.

I am confident that belladonna is a remedy of rare value in certain cases during the first two weeks of typhoid fever. The specific indications are dulness of intellect, cool skin or cold extremities, sluggishness of the capillary circulation, and dilating or dilated pupils. Still, I have administered the remedy when these indications were not marked, in very small doses of the tincture, combined with aconite, and obtained excellent results. It prevents local congestion and stasis in the intestinal glands and equalizes the circulation.

Bryonia has an important place in the treatment of all stages of typhoid fever. Whenever there is tenderness on deep pressure, sharp, quick, cutting pains, or evidences that the peritoneum is involved, this remedy will control the temperature. It will exercise a beneficial influence upon the inflammatory processes also, as it also has a specific action on the structures of the intestinal walls. Homeopathists use this remedy in the treatment of the fever during the period of prostration—the asthenic stage—and obtain excellent results; and my own observations confirm this method. I think, if the dosage be small enough, it may be given in alternation with aconite, but the dynamic rather than the physiologic action of both agents must be sought for.

During this stage rhus toxicodendron is a remedy of value. The sharp, burning heat in the skin, with circumscribed bright-red spots upon the cheeks, sordes upon the teeth, the tongue and mucous membranes dry and red, the eyes bright and restless, presence of tympanites, all demand this agent. If the tongue be bright-red, with a pointed tip upon which the papillæ are elongated and pointed, this agent will be of direct benefit.

Arnica is indicated in those cases where the nervous system is greatly at fault—is greatly depressed. It increases the nerve-force, adds strength to the heart, slows the pulse, and reduces the temperature. It is especially indicated where, from extreme depression, there are fre-

quent involuntary discharges. Where there is low, muttering delirium, the tongue dry and parched, and the throat apparently clogged with foul, stringy mucus, it is demanded. It stimulates the respiration and promotes the oxygen-carrying power of the blood. It increases nerve sensibility, overcoming paresis. It acts upon the secretory function of the skin and kidneys in a satisfactory manner. The dose is small—from 5 to 15 drops in a 4-ounce mixture is given in dram doses frequently repeated.

The coaltar derivatives *have no place* in the treatment of this disease. In minute doses no results are apparent, and in large doses the destructive influence of these agents upon the red blood-corpuscles and in forming methemoglobin, and their weakening influence upon the heart overbalances any beneficial effect their depressing influence may have upon the temperature.

Cactus Superior to Digitalis

Much is said concerning the desirable influence of digitalis in typhoid fever. When this agent is studied in comparison with cactus grandiflorus, and the latter remedy is fully understood in all its bearings, it will be found that cactus is superior to the other, better-known drug. Cactus increases the musculomotor energy of the heart, increasing its power, seeming to supply nutrition to the central nervous system. It stimulates the heart, actually increasing nerve tone through improved nutrition of the entire nervous and muscular structure of the heart. It does not merely whip up the heart as do digitalis and strychnine, but it adds tone. It produces no gastric irritation, and, being nontoxic, is harmless in any dose.

The influence of cactus, therefore, in the extreme prostration of typhoid fever, is most salutary. It also prevents heart complications and relieves the strain which the persistent high temperature and increased activity of the circulation throw upon this organ. Through this influence it certainly restrains the temperature. When typhoid or other protracted fever has produced dilatation of the heart, we have no better remedy than cactus.

Hemorrhage is almost an unknown complication with those who have used echinacea in typhoid fever. If it occurs, it is treated with astringents, according to its indications. A full dose of ergot will sometimes exercise a wide influence of much value over the entire circulation, or, if hemorrhage is anticipated, this agent may be given, in from 5- to 10-minim doses every three hours, with great advantage. Its influence upon the central nervous system is most salutary if there be a tendency to dulness or coma. Hamamelis, thuja, collinsonia, erigeron, capsella or aromatic sulphuric acid or nitric acid often are most serviceable remedies when selected according to their specific indications. In extreme passive hemorrhage, gallic acid is important, especially in hematuria.

The delirium must be treated directly. I have observed that but little benefit from any other treatment will occur while delirium exists. For this condition hyoscyamus is of much value in the excitable, or wild, form. It may be given with confidence. It may be given alternately with ergot or gelsemium if determination of blood to the brain be plainly apparent. Ergotin granules are most convenient.

In extreme stupor with subsultus tendinum I have obtained the best results from hydrobromic acid, 15 minims, and ergot, 10 minims, every two or three hours, and persisted in until the condition was overcome. This is especially true if the indications for general acid treatment are plain.

The bromides and chloral in consistent doses will occasionally be found of service in the insomnia and restlessness of typhoid fever. Hyoscyamus, passiflora, and cannabis indica are also of much value.

Diarrhea will not prove a serious complication if no active physics have been given, and if the bowels be freely flushed, after each large movement, a few times with an antiseptic flush. Geranium, epilobium or erigeron in sufficient doses will usually control excessive action. Thorough irrigation of the colon with the physiological salt solution, to which is added a few drops of carbolic acid, will usually control the diarrhea, remove existing tympanites effectually, and restore to a degree the

strength of the patient, increasing the force and volume of the pulse.

Quinine has no place in typhoid fever as a specific antipyretic, but in those cases where malarial manifestations are present as a complication it may be given in the early stage of convalescence, but only at that period of each twenty four hours when the temperature drops below 101° F. And it must be discontinued when any apparent nervous irritation appears from its use. The bisulphate of the alkaloid should be given, in preference to the sulphate, because of its ready solubility and absorption. This agent may be continued in conjunction with the tincture of iron as a tonic throughout the twenty-four hours when the temperature is normal and the secretions are restored.

Other restorative agents are nux vomica, strychnine (preferably the strychnine arsenate), hydrastis, phosphorus or the glycerophosphates, bovinine, the hypophosphites, and codliver oil. I have combined the tincture of iron and dilute phosphoric acid in equal parts and given full doses of this combination with small doses of quinine, with good results. Other tonics will suggest themselves to the experienced physician as directly indicated.

In the case of a young lady of 18 who weighed 90 pounds, after an unusually severe attack, I obtained the most rapid improvement I have ever obtained in thirty-five years' experience, from any course, by 1-grain doses of extract of nux vomica every three hours. This is enormous dosage, and I do not advise it.

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[We could not resist the temptation to editorialize briefly on this splendid paper. See page 471.—ED.]

Sexual Impotence in the Male

Its Causes and Treatment

By WILLIAM J. ROBINSON, M. D., New York City

Editor of The Critic and Guide and The American Journal of Urology; Author of "Sexual Problems of Today," and "Never-Told Tales"

III

ORGANIC CAUSES.—There are certain organic conditions of the penis and testes which render intercourse either physically impossible or very difficult, or at least unsatisfactory. But most of those conditions are of a purely academic or theoretical interest; they are so rare that a physician may not see a case during his entire practice. Such, for instance, are: congenital absence of the penis or its loss from ulceration; hypertrophy of the penis, its size being so large that it can not be introduced into any vagina; double penis; bifid, or split, penis; webbed penis, where the organ is united to the scrotum; tumors; plastic exudations; torsion, where the penis is twisted or bent in a vicious direction, so that intromission is difficult or impossible; hermaphroditism; fracture, and various other conditions. *Epispadias*, or the condition in which the urethra opens on the upper surface of the penis, and *hypospadias*, where the opening is on the under surface, are usually, but not necessarily, accompanied by impotence: it depends a good deal on the extent and the location of the defect. Where a good deal of tissue is lacking either in the corpora cavernosa or in the corpus spongiosum, no erection is possible. The relation of these two anomalies to impregnation will be considered in the chapter on sterility.

Abnormalities of the testes.—Complete congenital absense of the testes is of course accompanied by lack of libido and lack of potentia, both of *coeundi* and of *generandi*. As a general rule this is also true of cryptorchids, where both testes are in the abdominal cavity. This rule, however, has decided exceptions. In Prof. Lang's clinic, in Vienna, I saw a young cryptorchid who had powerful erections and perfect *potentia coeundi*. He was in

the clinic for *multiple* chancres—two on the penis and one on the abdomen—which he had contracted. Monorchids often are sterile, but all the individuals encountered in my practice were sexually potent. They came for treatment because they and their wives wanted children, and not because they had any complaint about their potency.

Atrophy of the testes.—When atrophy of the testes is caused by a general constitutional or by local disease, or by masturbation or sexual excess, it is accompanied by loss of libido and by impotence. I know of no exceptions to this statement. But this is not invariably true when the testes are lost through accident or castration. As a general thing, loss of the testes does lead to complete impotence, but there are numerous exceptions. And the usually prevalent opinion that eunuchs are incapable of sexual intercourse has been shown to be erroneous. Some castrates are very powerful in this respect. They have strong erections and "seminal" emissions, the emissions in such cases coming principally from the prostate gland. It must be borne in mind that the prostate gland is an important sexual organ, and plays an important role in the sexual act. Its role has been underestimated too long.

Neuralgia of the testes, of the spermatic cord, of the urethra, of the neck of the bladder may be a causative factor in premature ejaculation. But it is a rare condition, and, as a rule, readily curable.

Hydrocele.—If excessive, this may become a mechanical cause of *impotentia coeundi.* If long continued, it may cause atrophy of the testicle or testicles, and thus be also the indirect cause of loss of libido and of *potentia generandi.* Fortunately the condition of hydrocele is easily removed.

Hernia.—A scrotal hernia may be and often is a mechanical cause of impotence. The penis is not sufficiently large to protrude, so to say, above the scrotal mass. The testicles may also be injured, as in the case of a large hydrocele.

Varicocele.—In the mind of the laity, the relationship between varicocele and impotence is well established; this opinon has been fostered by the quacks, who diagnose varicocele, whether it exists or not, and who advise an operation for this affection as a cure for all ills of a sexual nature. We are not so sure of this causal relationship. We do not deny that it may exist, but we have not been able to assure ourselves of it. We have seen men with varicocele who were impotent, we have seen men with varicocele who were perfectly normal sexually, and we have seen men with varicocele who had an abnormally strong libido and potentia. I have, of course, seen cases where an operation for varicocele resulted in the cure of impotence, but my impression was that the impotence in those instances was purely psychic, and in psychic impotence any procedure which impresses the patient may result in a cure. Where the varicocele, however, is well pronounced and extreme, it may, by establishing a vicious circle, be the cause of impotence, and should be removed before other treatment is attempted.

Diseases of the prostate gland.—Any abnormality of the prostate, such as hypertrophy, prostatitis, is apt to lead to sexual impotence. In prostatitis, it is usually temporary, and relief of the prostatic condition removes the impotence. It is well to bear in mind that in prostatic trouble, *diminished* sexual power or premature ejaculation may exist simultaneously with an *increased* libido.

Atrophy of the prostate gland.—This condition is rare and it cannot be considered alone a cause of impotence; for the prostatic atrophy is generally accompanied with general atrophy of the genital organs.

Phimosis and preputial calculi may be serious hindrances to the proper performance of the sexual act. They are a frequent cause of premature ejaculations. I mentioned preputial calculi. Sometimes it is not calculi, but just dirt, and the amount of it under some prepuces is simply incredible.

I treated, not long ago, a bookkeeper, thirty-nine years of age, who had recently married and found that he was not in a fit condition. Intercourse was painful and ejaculations were premature. The conglomeration revealed on retracting the prepuce, as well as the odor, was something frightful. He told me that never in his life had he retracted his prepuce once! He

didn't think it was either necessary or possible to do it. Besides—he taught a class in a Sunday school—he considered it sinful to bother with his genitals. He was chaste and clean until his wedding day (chaste, yes; but clean—certainly not!). The mere removal of the preputial concretions ameliorated his condition considerably. Cleanliness about the genitals either in the male or in the female is not yet so universal as it should be.

Gonorrhea.—Gonorrhea is one of the great causes of sexual impotence, ranging probably next to masturbation in this respect; not, however, gonorrhea, by itself, directly, but by its sequelæ. Just as by its causing epidydimitis and orchitis it is one of the principal factors of serility or of *impotentia generandi*, so by its causing congestion of the posterior urethra, prostatitis, etc., it is one of the principal factors in relative sexual impotence and *ejaculatio præcox.*

Stricture.—This sequel of gonorrhea plays a decided role in causing relative sexual impotence, that is, imperfect erections and premature ejaculations. The causative relationship between stricture and impotence can not, in my opinion, be the subject of any doubt, for the result of the treatment of stricture and the improvement in the potency is so marked and has been noticed by me so frequently, that to speak of a mere coincidence would be absurd.

Narrow meatus.—By some of the older writers a very narrow meatus was considered as one of the causes of impotence, relative or even complete. I have never seen an instance where this could be considered a causative factor, but I have seen a number of instances where a narrow meatus was cut liberally with *deleterious* effect on the potency, just as we often see cases where a free meatotomy has an injurious effect on the force and regularity of the urinary stream.

Parotitis.—The connection of the parotid glands with the testicles (and ovaries) is as well established as it is strange. That it may cause orchitis and epidydimitis, which may result in sterility, is well known. But I have not come across a single instance in which I could with certainty establish a connection between the impotence and the parotitis, as there were usually several other factors in these conditions which in themselves were sufficient to account for the impotence. I do not deny, however, that such causal relationship may exist.

There are a number of other causes which directly and indirectly influence the force of the erections and the time before the ejaculation, etc. Thus, for instance, *gravel* has a decidedly injurious effect, and is often the cause of *ejaculatio præcox.*

The same is true of *constipated* people with full recta, where the feces press upon the prostate gland. I have had a number of such cases in my practice, where the mere device of cleansing the rectum by cold-water enemata produced a most rapid and favorable effect on the sexual act.

Intense libido is very frequently the cause of premature ejaculation. This intense libido is often manifested, on the wedding night, when the couple have been long engaged. A word may be said here about *long engagements* as a causative factor in impotence. They are not only injurious, as being apt to cause intense libido—which is only a temporary trouble—but they may result in more or less permanent impotence, by virture of the severe prostatic and posterior congestion which they may cause.

The x-ray.—Working with the x-ray without proper protection is liable to cause impotence, though the impotence is generally an *impotentia generandi* and not *coeundi.* At the present time we do not see such cases as often as we did at first, when we did not know the power of the x-ray in this direction.

Other causes of sexual impotence of a nervous or psychic character will only be mentioned here. They will be referred to again in the section on treatment. Among these causes may be mentioned neurasthenia, congenital sexual frigidity, repugnance to women in general or to certain classes of women, and the numerous sexual perversions, among which the most important is homosexuality.

We have considered all the causes of sexual impotence in the male; we are now ready to consider the treatment.

(*To be continued.*)

The Treatment of Acute Gonorrheal Urethritis

By E. J. ANGLE, A. M., M. D., Lincoln, Nebraska

EDITORIAL NOTE.—This is the second paper in Dr. Angle's series on "Gonorrhea." Every general practitioner should read these articles, since they are being prepared with special thought to the interests of the family physician.

THE profession is largely responsible for the flippant and careless attitude with which the public regards gonorrhea. If gonorrhea is to assume its proper role, as a serious pathologic condition, in the eyes of the layman, the physician must, by his attitude and directions, dignify it and show that it is worthy of his best efforts and resources.

In assuming the treatment of a case of gonorrhea, the patient should be given a little talk on the disease, telling him of its far from innocent character, its tendency to relapse, its various complications, and the necessity of following treatment until all evidences of it have disappeared. At the same time he should be assured that in practically every case cure is certain under proper treatment.

The Dietetic and Hygienic Regimen

In the early period of the disease, the diet list must be carefully scrutinized and everything of a stimulating character interdicted. This refers to all alcoholic beverages, as well as to ginger, mustard, catsup, and other condiments. All charged waters are irritating to the urinary tract. Acid fruits should be taken in small quantities only. Milk is the ideal food. Large quantities of water should be drunk, if possible a glass every hour between meals. In this way free drainage is encouraged and the pus and the gonococci and their toxins swept from the urethra.

Absolute sexual continence is imperative and the mind must be diverted from all thoughts of an erotic character. The patient should avoid all unnecessary physical exertion and lie down as much of the time as possible.

The patient should be carefully instructed as to local cleanliness, and the necessity of washing his hands thoroughly after handling the parts, for fear of infecting his eyes or some innocent party. All soiled dressings should be burned. If the inflammation is severe, the penis should be immersed for ten minutes in water as hot as can be borne several times a day. A hot bath at bedtime and keeping the bowels free lessen the tendency to chordee. A suspensory bandage should always be worn. I have recommended for years what is known as the "sport bandage" (Fig. 1), which consists of a suspensory for the scrotum and an attached apron to carry the penis and its dressings. In this way the underwear and bedclothing are protected from the discharges and the penis from being rubbed and irritated by the garments.

Fig. 1. Improved "Sport" Suspensory

The best dressing consists of two layers of gauze with a little cotton interposed; being changed as soon as they become soiled. A supply of these can be carried. A gonorrhea-bag, or the foot of a stocking pinned to the underclothing and the glans surrounded with several layers of gauze, provides a fair substitute if a suspensory bandage is not available.

Internal Medication

We have departed from the practice of our fathers and no longer prescribe the

alkaline diuretics in anterior urethritis, as it is well known that the gonococcus thrives best in an alkaline medium. If the urine should be excessively acid, tablets of sodium or potassium bicarbonate may be taken between meals. The urine should remain slightly acid, as indicated by litmus paper. While the gonococci can neither be destroyed by antiseptics nor suffocated with balsams, the latter have a distinct value in rendering the urine bland and sterile and the urethra unsuitable for bacterial growth and development.

For use during the first ten days of the disease, I select from the following group of antiseptics: methylene-blue, salol, boric acid, helmitol, urotropin. Eligible combinations in the order of their preference are: (1) Methylene-blue, grs. 30; boric acid, drs. 2. Make into 30 capsules. (2) Methylene-blue, grs. 30; salol, drs. 2. Make into 30 capsules. (3) Methylene-blue, grs. 30; urotropin, drs. 2 1-2. Make into 30 capsules. The dose of either of these combinations is one capsule after each meal.

After the acute symptoms have subsided the balsams are indicated, and the best of the group is oil of sandalwood. Cubebs and copaiba have been relegated to the graveyard of obsolete therapeutic agents. The usual dose of sandalwood oil is 10 minims, which can be increased to 20 in individuals with good digestion. Just as efficacious and less prone to affect the digestion and congest the kidneys are the sandal-oil derivatives, santyl-Knoll, gonosan, lacto-santal, and stearosan.

I wish to protest against the reckless prescribing of balsam, for when taken in large quantities and for a long period of time, there is great danger of disturbing digestion and thus interfering with assimilation and nutrition.

Posterior Urethritis

The internal treatment of an average uncomplicated posterior urethritis does not differ essentially from that outlined for the cases before the deeper parts become involved. Oil of sandal usually meets the indication, but this may be supplemented by atropine if the urination is unduly increased or painful.

In the more severe types, accompanied by fever, tenesmus, and perhaps terminal hematuria, rest in bed is indicated. The bowels should be moved with a laxative saline, which will assist in relieving pelvic congestion. Milk is the ideal diet, rendering the urine bland and unirritating. A sitz-bath, prolonged for half an hour and taken several times a day, lessens tenesmus and the desire to urinate. The temperature of the water should be 100° F., to commence with, and then gradually hot water added up to the point of toleration. It is well to interrupt the use of the sandalwood oil for a few days. The following two combinations have proven reliable in my hands:

1. Codeine sulphate, grs. 4; potassium citrate, oz. 1; atropine sulphate, gr. 1-5; fluid extract of gelsemium, dr. 1; fluid extract of buchu, oz. 1; fluid extract of uva ursi, oz. 1; simple elixir, enough to make ozs. 6. Label: One teaspoonful every three or four hours.

2. Atropine sulphate, gr. 1-10 to 1-5; sodium salicylate, drs. 4; glycerin, drs. 4; water of gaultheria, enough to make ozs. 3. Label: One teaspoonful every four hours.

The vegetable drugs may well be given as their principles: i. e., gelseminine and arbutin

Suppositories of opium and belladonna, 1-4 grain of each, are useful in controlling the tenesmus. Chordee is best controlled with 5-grain doses of monobromated camphor and the application of an ice-bag.

After the acute symptoms have passed the sandal oil is resumed. It can be combined, with good effect, with an equal quantity of oil of wintergreen.

In this connection it should be stated, however, that, under modern methods of treatment, the severe type of posterior urethritis should rarely occur.

Local Treatment: Methods Employed

Success in the local treatment of gonorrhea depends upon a careful study and analysis of each case. The physician of large experience rapidly formulates a treatment for each type and can proceed more boldly than one less familiar with the clinical course of the disease.

Unless reasonably sure of one's ground, a conservative course should be selected.

Tuberculous and alcoholic subjects bear treatment badly and in them the infection tends to run a protracted course. I have found railroad employees among my most unsatisfactory patients, their irregular hours of employment and the jolting and muscular efforts incident to their work tending to induce epididymitis, prostatitis, and other complications.

Barring certain complications, the local treatment of gonorrhea should be commenced as soon as a positive diagnosis is made. The acute symptoms are not due directly to the gonococci themselves, but to the toxins generated by them. Early treatment, then, is doubly indicated: first, to destroy the gonococci present, and, second, to remove the toxins by the incident flushing of the urethra.

When the astringent injections were our main resource, it was customary to wait until the subsiding stage of the inflammation. This certainly was the part of good judgment, because astringents in the early period would only cause complications and fasten the gonococci more deeply in the tissues. But, with the advent of the organic silver salts, the treatment of gonorrhea was placed upon a more scientific basis.

We are able, in a measure, to meet the indications for the cure of gonorrhea as formulated by Neisser: (1) Destroy all gonococci within reach as early and completely as possible. (2) In doing so, avoid irritation of the mucous membrane and everything that will cause pain or increase the inflammation.

In the use of the organic silver salts I restrict myself to four, namely, albargin, argyrol, protargol, hegenon, each of which has a distinct field in the plan of treatment to be prescribed. It is best to employ but a few remedies, but to be thoroughly familiar with the action and application of these.

The following instruments and materials should be at hand for office work: (1) Instillation syringe and catheter. (2) Urethral and bladder-syringe of 150 Cc. capacity. (3) Urethral syringe of 30 Cc. capacity. (4) Hard-rubber olive for use with these syringes.

Materials: (1) A 2-percent solution of albargin. (2) Solutions of hegonon of 0.5 and 1 percent. (3) Solution of argyrol, 20 percent. (4) Stock solutions of silver nitrate of 0.25, 0.5, and 1 percent. All solutions should be kept in amber-colored bottles. The albargin, hegonon, and argyrol solutions should be freshly prepared every three or four days.

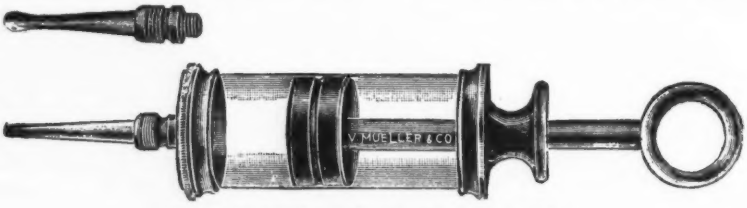

Fig. 2. Syringe for medicating the anterior urethra

The Abortive Treatment

Only relatively few of our gonorrheal cases are suitable for the abortive treatment. Ordinarily, when a victim presents himself with a case of acute gonorrhea, he has a thick, creamy discharge and a highly inflamed urethral mucous membrane. Abortive treatment is not to be thought of, as the gonococci are already deeply intrenched in the tissues.

The ideal case is one in which the period of incubation has not been more than three days and the local symptoms of from twelve to twenty-four hours' duration. Subjectively, in these cases, there is felt a slight burning and itching in the urethra. A clear or slightly cloudy discharge is present, and it is small in quantity. Microscopically, one finds in the secretion much epithelium, leukocytes, and a few gonococci, the latter mostly being free or lying on the epithelial cells and but seldom inside the leukocytes. In this stage the gonococci are on the sur-

face of the epithelium. With a suitable bactericide it is possible to destroy these pathologic germs without doing harm to the tissues. The agent selected should be such that, in case the abortive measures fail, the mucous membrane is no worse off than before. Albargin, here, has most nearly met these requirements in my own practice.

In using albargin in the abortive treatment, I proceed as follows: The secretion is first examined under the microscope and the diagnosis confirmed. The patient then urinates into two glasses. The second glass should be clear and the first only moderately cloudy with specks. The patient is placed on his back and the usual cleansing toilet of the glans and prepuce is done. A 1- to 2-percent solution of albargin is drawn into a 1-ounce syringe (Fig. 2), the fluid being at body-temperature. The anterior urethra is filled with this solution to the point of moderate distention. Pressure is made upon the perineal urethra to prevent any of the fluid passing further back, as in many subjects the compressor urethræ is relaxed. After injecting, the olive-tip of the syringe is not removed, since it serves to retain the fluid in the urethra. After three minutes the first injection is permitted to flow out, and a second one is made, this being held in three minutes; and finally a third one, of two minutes' duration. In all, the albargin solution is retained in the urethra for eight minutes.

This treatmnet is repeated at the physician's office daily for three days, the effects being carefully noted. The discharge is examined microscopically each day, to see whether any gonococci are present. At the same time the patient uses, at home, a 0.25-percent solution of hegonon every three hours. If the local inflammation is increased by the treatment, the patient is directed to immerse the penis in water as hot as can be borne, for ten minutes several times a day.

After the third treatment the patient is directed to return after two days, and if at that time no gonococci are found, upon careful examination, a provocative instillation of 0.5-percent silver-nitrate solution is made in the anterior urethra. With 2 Cc. of this solution held in, the urethra is gently massaged. The treatment at home is continued for another two days, when the patient presents himself for another examination. If little or any pus and no gonococci are found, then silver-nitrate solution (1 percent), is instilled in the anterior urethra. If again there are no gonococci in two days, we can consider the attack aborted. If gonococci persist after the third injection or they reappear after the silver-nitrate instillation, abortive measures should be abandoned and treatment continued according to routine methods.

Routine Treatment

If the urinary meatus is quite small, it should be enlarged by a suitable incision. There is little danger of infection and the wound cicatrizes in a few days.

The irrigation method of treating acute gonorrheal urethritis has very properly been abandoned, both in this country and abroad. The effects of irrigation are contrary to the requirements of an acutely inflamed membrane. The late Dr. Taylor was one of the first to oppose irrigations and time has fully justified his criticism.

The small hand-syringe still remains the only safe and efficient means of applying solutions to the acutely inflamed urethra. It should have a capacity of 3 or 4 drams, be made of glass or hard rubber, and have a blunt tip. The quantity injected will, of course, depend upon each individual urethra and the degree of inflammation. Sufficient fluid should be injected to distend slightly the canal without causing pain or discomfort.

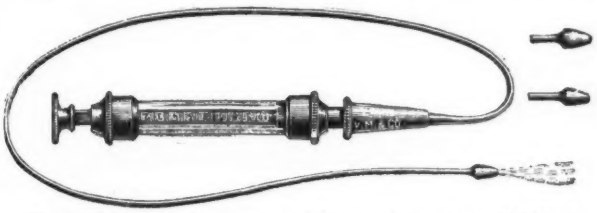

Fig. 3. Syringe for the treatment of the posterior urethra and bladder

It is important to instruct the patient in detail as to the proper manner of injecting. I have had patients consult me who for weeks had been injecting into the preputial sac. If the compressor urethrae is relaxed, the patient may rest the perineum against the side arm of a chair while making the injection. The passing of the fluid back into the deep urethra and bladder is not infrequently the cause of unsatisfactory results.

For many years argyrol and protargol have been recognized as the two most valuable silver salts in this condition. Argyrol, in my hands, has been more or less uncertain, at times causing a very free discharge. The strength in which it is ordinarily used makes it too expensive for routine use. I now restrict it to acute posterior urethritis, where its soothing qualities render it an ideal agent. Protargol is more penetrating, more constant in its action, and possesses greater bactericidal power. The only objection raised against protargol is that at times it proves irritating.

A year ago Schering & Glatz placed in my hands a supply of a new proteid silver salt, called hegonon. I have treated fifty patients with it, ten of whom had uncomplicated acute anterior urethritis. Six of these ten patients were definitely cured inside of two weeks; in four there developed deep urethritis and the duration was more prolonged—from six to eight weeks. However, the men were irregular in reporting at the office, and home treatment was carried out in a desultory manner. I feel justified in stating that hegonon possesses all the virtues of protargol, besides the advantage of being less irritating.

Mode of Giving Routine Injections

The method pursued is as follows: The patient urinates before each injection, which serves to wash out the accumulated secretion. For the first week he uses a 0.25-percent solution of hegonon*, retaining it for three minutes. The injections are made every three hours during the day and once or twice during the night. At the first examination, and on alternate days thereafter, I inject the urethra with a somewhat stronger solution of hegonon, using double the strength of that used at home. For the first week this would be 0.5 percent. The injections are made with a 1-ounce syringe, this amount enabling me to fill the urethra three times. The technic is precisely the same as that given in the abortive treatment with albargin. The urine should be examined each time, and a smear be made for gonococci.

*Protargol may be substituted for hegonon, in the same strength, if desired.

The Second and Third Weeks

If, at the beginning of the second week, the first urine is less cloudy and less discharge is present, the strength of the injection is increased to 0.35 percent and given every four hours and retained for four minutes. The patient may then omit the night injection. During the third week, the strength of the solution is increased to 0.5 percent, and injected three times a day and retained for five minutes. At this time a 1-percent solution is injected at the office. An exacerbation of the symptoms or pain at the time of injection necessitates a weaker solution.

The discharge, in some cases, will have ceased before the end of the third week, in others a slight secretion remains. If a smear subjected to microscopical examination reveals few pus-cells, considerable epithelium, and no gonococci, and the same findings two days later, an instillation of nitrate of silver (0.25 percent) is given, and the patient directed to continue home treatment as before. At his next call, if no gonococci are found, a 0.5-percent silver-nitrate solution is instilled, and later still one of 1-percent strength. Then, if the findings are still negative, the infection is probably eradicated.

The behavior of the urethra toward the nitrate of silver instillations is an accurate index of the presence of infection. If no gonococci remain, little irritation and discharge follow, while, if gonococci are stirred up, the discharge will continue to increase.

If gonococci are present in the secretion at the beginning of the fourth week, the injections of hegonon are continued in 0.5-percent strength at home and of 1-percent

at the office. At this time the urethra should be quite thoroughly distended, so as to force the injection into the crypts and follicles, the infection of which tends to prolong the disease. If the gonococci have not disappeared by the end of the fifth week, there is probably infection of the deep urethra.

It is not my custom to use astringents as long as gonococci remain, and the cases are few in which discharge remains after their elimination. Occasionally, though, a "leaky" urethra is found, and here the customary astringents will be necessary to restore tone. In this contingency, silver-nitrate instillations, at intervals of three or

Fig. 4. Hard-rubber olive for use with either syringe

four days, are valuable and will assist the astringent in the work of repairing a damaged urethra.

Acute Posterior Urethritis

This may be unaccompanied by subjective symptoms, and it is first observed by the physician in examining the urines in the two-glass test, the second as well as the first being cloudy. In mild cases the treatment of the anterior urethra remains the same as just described. In addition, instillations of 4 Cc. of 20-percent argyrol solution are made into the deep urethra every second day. The tip of the catheter is passed through the membranous urethra and just enters the prostatic portion. After a week hegonon (0.5 percent) may be substituted for the argyrol.

In the severe type of deep urethritis, with dysuria, tenesmus, and showing considerable pus in the second glass, all local treatment should be discontinued until the acute symptoms have subsided. The local treatment with argyrol and hegonon is then taken up, as in the milder type.

The hegonon solution is injected into the deep urethra with the glass syringe. After having cleansed the anterior portion of the canal several times, it is thoroughly distended and the tip applied to the meatus so as to prevent leakage. With moderate force the solution is, if possible, forced into the deep urethra to the amount of several drams. If the compressor muscle resists the passage of the injection, the meatus is carefully compressed and with a stroking movement of the finger the urethra is massaged from before backwards, thus insuring medication to the parts beyond.

If the deep urethral infection does not clear up after several weeks' treatment, the prostate gland should be gently massaged every three or four days, followed by argyrol instillation or hegonon injection. An occasional instillation of silver nitrate (0.25 to 1 percent) is beneficial in cases tending toward chronicity. Shreds from the deep urethra and the secretion massaged from the prostate gland should be regularly examined for pus and gonococci. Treatment should be diligently persisted in until the gonococci finally disappear.

Gonococcic bacterin is entirely without value in the treatment of acute urethritis.

Phimosis, paraphimosis, folliculitis, urethral abscess, cowperitis, dorsal lymphangitis, and inguinal adenitis call for the cessation of local treatment. The treatment of all these demands rest and the application of well-known antiphlogistic and surgical measures. Unlike the chancroidal bubo, I have never known a gonorrheal one to go on to suppuration.

Swiss Universities and Their Medical Faculties

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THE Swiss people have a very old and heroic history. Their political liberty dates back nine hundred centuries and has given inspiration to many poets, among whom Victor Hugo and Schiller stand foremost.

The exceptional position of Switzerland, politically, is due to its geographical location, which is at the meeting point of four great nations speaking three different languages: in the north, Germany; in the east, Austria; in the west, France; in the south, Italy, from which the Alps separate the country. The Rhine forms the dividing line from Austria and Germany; the Jura Mountains and the River Doubs mentioned in the commentaries of Julius Caesar on the Gallic War, separate the country from France. As for the history of the Helvetian land, that goes back to and is lost in the night of time.

The Switzerland of today is composed of twenty-five cantons, which are, in fact, twenty-five republics or commonwealths with their own languages (French, German, Italian) and their own customs, but which exist under the supervision of the federal constitution, or Helvetic agreement, that gives body and cohesion to the different elements. The Swiss Federation, being the oldest civilized nation with a republican or representative form of government, presents much of interest to the student of civics. To the readers of CLINICAL MEDICINE we wish to mention some of the educational advantages of this unique little country.

Switzerland possesses five complete universities, each of which includes a medical faculty. While the universities grant the doctor's degree, the right to practise is only obtained by federal licenses, which depend upon the medical examinations determined by the federal laws; and the official diplomas are granted through the federal power, although the universities are maintained by the cantons which have founded them.

First of all, at the angle which the Rhine forms on leaving Switzerland in order to enter into Germany, we have the very old city of Basle (Basel, Basileia, that is, the royal one). Her university is very old, and was founded by Pope Pius the Second in 1460. Two names are especially to be remembered among those of the illustrious physicians who taught at her faculty of medicine.

Andreas Vesalius

The first is that of Andreas Vesalius (1514–1564). This great man, who has been called the Luther of anatomy, appeared at the very moment when the human mind began to assert itself, on the day when breaking with dogmas and metaphysics, both used up and antiquated, people realized that experience is the sole source of truth. This period of history was a heroic one for science.

Born at Brussels, Vesalius studied first in Louvain. His zeal for dissection caused him to be persecuted, and he was obliged to flee his country. He admits, himself, that he robbed the cemeteries, and that he took bodies from the gallows and hid them for weeks underneath his bed in order to dissect them at night. He eventually studied in Paris with Sylvius, who gave his name to "the fissure of Sylvius." Vesalius' knowledge of human anatomy was so great that with bandaged eyes he could recognize by touch and could name without making a mistake each one of the bones of the wrist and ankle, and could, moreover, tell whether they belonged to the right or left hand. His knowledge of Greek and Arabic permitted him, with his experience, to refute the authority of Galen, which had hitherto been un-

assailed. This course brought him notable enemies.

At the age of twenty-nine, in 1543 in Basle, Vesalius published his work "De Fabrica Corporis Humani" (in seven volumes), which Boerhaave called "an inimitable book that will never perish." The University of Basle still possesses in its collection a skeleton mounted by Vesalius himself. He went, later on, to Madrid and became physician to Emperor Charles V and then to Philip II of Spain. He died on the return from a pilgrimage to Jerusalem, on the coast of the Island of Zante, ill and abandoned by his people, because he had dared to dissect cadavers. He was buried by a stranger who had known him in Madrid, and who put the inscription on his tomb: "Tomb of Andreas Vesalius, of Bruxelles." Here we have an epitaph which did not lie.

Paracelsus Was Born in Switzerland

Another name of which medical Basle may be proud is that of Theophrastus (Paracelsus) Bombastus von Hohenheim, born in 1493 in Einsiedeln in central Switzerland. He died in 1541. In his youth he was a great reader of the mystic chemists [alchemists.—Translator], and he had traveled through the principal countries of Europe, when, at the age of thirty-three, he was called to the University of Basle.

Paracelsus' occupation of a professor's chair constituted a veritable manifestation of the new medicine. Instead of speaking Latin, he expressed himself in German, breaking thus with the habits of centuries, and he threw himself into a violent diatribe against Galen, whose works he burned in the open theater. It was thus in Basle that two glorious pages in the history of medicine were written.

The medical history of Basle is not alone of the past, but among the men who were or are prominent in medicine we shall mention only the physiologist Wiescher who, in 1874, made some important contributions to the knowledge of nucleins; Bunge, who was one of the first to show, scientifically, the deleterious action of alcohol; the internist Zimmermann; the surgeon Svein; and Ruetimeyer, the student in comparative anatomy. Many others could be named of whom Basle is proud and whose reputation attracts students to their old alma mater.

The University of Bern

Bern, the capital of the Swiss federation, has a much younger university, her medical faculty having been founded only in 1834. The instruction in the medical sciences is given in the celebrated Island Hospital. It is there that the surgeon Theodore Kocher, still admirably active in spite of his seventy years, has operated on more than one thousand goiters, and made his celebrated studies upon the cachexia thyreopriva, thus showing the role played by the thyroid body, whose function was hitherto unknown.

Dr. Paul DuBois has an international reputation for his studies in psychology and psychotherapy, which branches he teaches at the University of Bern.

In Bern, also, Hermann Sahli, professor of clinical medicine, discovered and experimented with salol, guaiacol, pantopon, etc., and here he collected the elements for his classical work on medical diagnosis. The anatomy of the placenta was determined in the pathological institute, which is a portion of this great hospital.

Zurich and Geneva

Zurich, in central Switzerland on the Lake of Zurich, is a university rivaling that of Bern. Billroth, Eberth (discoverer of the bacillus of typhoid), Klebs taught here. Here also the ophthalmologist Horn carried on his investigations which modified ophthalmology. Here, also, Forel made his scientific studies which placed him at the head of the modern antialcoholic movement.

If we pass to the French part of Switzerland, we find Geneva, the city of Calvin, claiming the names of Saussure, of Trochin (physician to Voltaire), and especially those of the brothers Reverdin (Charles and August), who devised skin grafting, thus aiding the healing art in making a tremendous and decided step forward. Here, further, practised the surgeon Mayor,

one of the forerunners of Bier, in the treatment of inflammation by hyperemia. He also showed the methods of simple and practical bandaging, for instance the employment of the triangle, which are still in use.

Geneva is situated upon the River Rhone, at the head of this river, where it leaves Lake Leman in order to enter France.

On the north of this lake there is Lausanne, with her young university, which is famous through the surgeon Cesar Roux, a specialist in operations for appendicitis. At the university of Lausanne teaches Dr. Combe, who has the immense merit of showing that compaiative intestinal asepsis may be effected, besides by a milk diet and chemical antiseptics, by the employment of carbohydrates, especially by nourishing puddings and roasted rice. At this university also Dr. Bourget teaches, whose work on the diseases of the stomach is classic. He is professor of clinical medicine.

The Nez Percés Indians

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

EDITORIAL NOTE.—Another installment of Dr. Moody's Indian stories, which have pleased the members of the Clinic "family" so much during the last year or more. They are fine! Have you read them all? If you have not, go through your back numbers.

The "Tu-at" as a Physician

NO person appreciates more fully than myself that the preceding chapters in this narrative have been only of passing interest to the physician. The character of the Nez Percés, their habits and beliefs have been touched upon in the hope that to record them would prove of interest to the public. They are the representatives of a passing race and as such a knowledge of their customs should be preserved.

In this paper it is my aim to discuss a subject in which the medical man is more specifically interested, namely, the healing of the sick. It is a fact that we who are familiar with all the modern methods of healing do not always pause to recall by what gradual degrees the science has evolved from crude superstition and incantation to a verity. It is not so many years ago, as time runs, that our own disciples of the healing art were wont to resort to the same measures that the Indian "tu-at" does at this day to eradicate disease, and to do so with the very same notion of disease as held by the latter. As chemistry grew from alchemy, so did medicine grow from incantation. If the savage believes himself possessed by a devil, when he is sick, we should recall that less than two thousand years ago the most civilized people on earth entertained the same view.

The Medicine-Man's Combat with the Disease-Devil

The "tu-at" was primarily a priest, but the more important part of his work, judged from its influence upon the people as a whole, was that of administering to the sick. As I have stated, up to a certain point the savage tried to eradicate his disease himself. When, however, all his measures failed, he was wont to call in his ghostly adviser, for the thing had progressed beyond the power of human skill and he must invoke the aid of supernatural assistance. In other words, the thing ceased to be a mere visitation of disease, but became the invasion of an evil spirit. Just when, in his opinion, this transition took place it is impossible to state, probably, though, at about the time the sufferer found that his own meagre remedial measures were of no avail.

Let us suppose, for the sake of illustration, that an Indian was ill with rheumatism, as that was one of the commoner complaints. He had tried all the time-

honored remedies for that disease without avail. His limbs were still racked by pain, despite his efforts. Very well, his case now was one where an evil spirit had gotten hold of him—and no human being could prevail against the spirit except the "tu-at." The "tu-at", therefore, was summoned.

Now, do not imagine that the "tu-at" came gratis. He was not like a great many physicians of my acquaintance; he had to be paid, and what was more, the pay had to come in advance. If the patient was well fixed financially, he was taxed "all the traffic would bear." A certain number of horses were demanded, a certain number of robes, blankets or whatever happened to be the most in demand. These were counted out before the savage practician went to work. If some of us civilized practicians would emulate the custom of this red physician our store of this world's goods would show up more respectably at the end of the year. This payment was usually made through a friend of the sick man, it being held that for the patient himself to drive the bargain would anger the bad spirit and make him harder to exorcise.

The bargain consummated and the goods delivered, the "tu-at" proceeded to array himself for the battle. It was a battle, in his estimation, one in which he was to pit his power against the powers of evil. Generally he caused to be erected a tepee near the one occupied by the sufferer, though this was not always the case. Into this tepee the "tu-at" retired, donned his robes of office and collected his tools of combat.

The robes usually consisted of a skirt, or cassock, made of white hare skins, although every "tu-at" had some distinctive mark. Not infrequently, however, no especial garment was worn. His implements of incantation consisted of a bow-shaped rattle made of the horny endings of the rattlesnake or of a number of dried hoofs of deer or elk. One or the other of these was imperative. The pipe came next, this usually being made from pipe-stone, although silver and even lead were also used. It had a long stem decorated with feathers, beads, and porcupine quills. I do not know what was burned in the pipe, but the leaves of the laurel, kinikinik, and, later, tobacco entered into the mixture. The smoke had a very aromatic odor. Then came a dried bladder attached to a long stick or, sometimes, to a human radius. This was inflated and used to pound the evil spirit out when once he was loosened from his hold on the patient. The last thing was a horn receptacle, or, later, a small bottle filled with an oil, either that from angle-worms or skunks. Frequently, in place of the oil, the receptacle was filled with a compound of meal made from camas and the borings of wood-worms. No "tu-at" felt himself qualified to fight the evil one without his mask, and this mask varied with the tribe to which he belonged. It bore the semblance of some bird or animal, the bear and the magpie being most in use.

How the Evil Spirit Was Exorcised

When all was in readiness, the "tu-at" crossed the space between his tepee and that of the patient. Not a soul was permitted inside the sickroom after the "tu-at" entered it. He stooped, entered and dropped the flap behind him. He and the evil spirit were alone with the patient. His first movement was to throw a small portion of the contents of the bottle upon the fire, repeating at the same time the prayer for such occasions. He then knelt beside the patient, bent over him, and sang the chant provided. Next he passed his hands down over the body and limbs, demanding of the evil spirit to vacate. Many times the patient professed himself well, and proved it by jumping up and dancing about the tepee.

If, however, the evil spirit proved perverse and refused to abscond in response to such simple measures, the "tu-at" employed more powerful means. He lighted his pipe and blowed smoke over the affected part. Then he fell to rubbing downward, if the part were a limb; in a circular direction, if it was the belly or thorax. These measures rarely failed; nevertheless, there were spirits that resisted even these powerful remedies. In that case, the "tu-at" played the last trump in his hand. He seized his rattle and scared

the everlasting daylights out of the devil, then chased him out of the tepee with the bladder, beating him all the way out.

The maneuvers as here described were frequently varied. In certain cases it was necessary to burn the devil out. This was done with lighted willow wands or willow sticks that were a glowing coal of fire. By the way, this procedure often had the effect of actually curing rheumatism—by counterirritation, doubtless. A poultice of red-hot ashes often was used in cases of pneumonia, with good results. During all the time the "tu-at" was at work the patient's friends were busy outside singing, to aid in the exorcising process. The song was calculated to hasten the departure of any devil of my acquaintance. The "tu-at" himself kept up a continual moaning song all through his incantations.

When the "tu-at" failed to work a cure, there were two or three reasons for it. Either his "medicine" was not powerful enough or the patient had not put up sufficient collateral to effect the cure. In the latter case, his friends all contributed, if the patient himself was destitute, or he paid over more honorarium if he happened to be in wealth. In case the "medicine" was too weak, the "tu-at" sought the solitudes and prayed for stronger light. This fasting and prayer often lasted for several days, or until the patient was dead. It was surprising, though, to see the number of people who recovered under these incantations. I will cite one case as an illustration.

Where the Indian Doctor Came Out Best

A certain ancient savage was doubled up with rheumatism. So knotted and gnarled were his limbs that he could not feed himself or mount his horse without help. I tried all the "dope" in my cabinet, without avail. Finally he discarded my services and sent for the "tu-at." That august official came and smiled sardonically at my feeble efforts, informing at the same time the assembled friends that the "medicine" of the white man might be all right for white people, but it was hardly the thing for any sick Indian. So the "tu-at" erected his tepee, donned his paraphernalia, and got busy.

Judging from the howling and lamentations and ungodly noises that came from the tepee where the sick man lay, one was forced to suppose the devil-chaser to be laying out his most powerful "medicine." And, actually, in about two hours, to my surprise, I saw the sick redskin appear, followed by his medical attendant, both of them steaming with perspiration. A smile of triumph was spread over the "tu-at's" face as he confronted me with his patient. The cure was unquestionable and complete. The former rheumatic strode out to the corral, saddled his pony and rode away to visit his people up the river. My medical stock was away below par in that neighborhood for several moons.

As before stated, up to a certain point the Nez Percé Indian did not look upon his illness as calling for the intervention of his "tu-at." Before it reached that point he sought, by certain rude measures, to alleviate his suffering himself, or rather by means of things known to have worked relief to that particular class of diseases. As in certain civilized communities, there were Indians who possessed some special skill in treating disease. They were looked upon much the same as we look upon midwives and old women who have a store of rude knowledge of disease, and generally a stock of herbs from which they manufacture teas and decoctions for treating the commoner ailments. It would be folly to assert that these remedies did not at times bring relief. We know, in our experience, of many instances where some motherly old lady has prescribed a simple remedy from her household store which brought about wonderful results.

How the Indian Takes His Turkish Bath

The greatest remedial measure known to the savage was the "sweat-bath." This institution seems to have been in use among all the Pacific Slope Indians, and, for what I know, the plains tribes as well.

The "sweat-bath" had a threefold purpose—religious, hygienic, and remedial. It is only with the last kind that we shall concern ourselves. The method of applying it was the same in each instance, the intention only differing.

A custom affecting the life of a people, like the "sweat-bath", may be considered at greater length than the circumstances would, at first glance, seem to warrant. Let us, therefore, look upon the matter from its very foundation.

No sooner did a band of Nez Percés locate a permanent camp, than they erected their bath-house. This was located upon some stream or near the shore of a lake. The Indian first scooped out a circular pit eighteen inches in depth and about six feet in diameter; above this he bent a framework of green willow sticks, to form an oval hut; the framework was first covered with a matting made from rushes, and then earth thrown over it; the earth was then covered with a matting of green turf, or failing that, with several thicknesses of blanket or buffalo robe. A small opening was allowed to remain in one side, the side next the water. In front of the hut another shallow pit was dug, and this filled with large round stones.

Let us now suppose that our Indian, finding himself ill, decides upon a sweat-bath. He repairs to his "sweat-house," collects dry wood and lights a fire upon the heap of stones in the pit before the hut. When the stones are heated, he divests himself of his garments, rolls several of the heated rocks into the hut, then creeps in after them, taking along a large vessel filled with water. A companion or his wife covers the opening with several layers of blanket, and the patient is alone with his trouble and his remedy. He now starts in to dash water upon the hot stones until the hut is filled with vapor, which is seen to ooze from every crack of the structure. Then he sets up a chant, which continues until the bath is ended, usually after about an hour or so. When he is ready to emerge, he throws back the covering and dashes into the river. It does not matter how cold the water may be—I have often seen them break through six inches of solid ice to get at the water. He splashes about in the water for several minutes, then perhaps returns to the sweat-house, repeating the process. When ready, he clothes himself in blankets and returns to his tepee.

As will readily be appreciated, this heroic treatment in certain cases may be beneficial, but in the exanthemata and certain febrile conditions it proved very fatal. Three-fourths of all deaths from measles and smallpox were due to the sweat-bath, while in pneumonia it claimed practically all the victims. It was a very difficult matter to wean the people away from their sweat-bath—so difficult, in fact, that I hesitated about trying it.

The Primitive Mud-Bath and Other Treatments

A modification of the sweat-bath was the mud-bath. In cases of articular rheumatism, arthritis, and sprains, bruises, etc., the Indian applied the mud-bath, and applied it with excellent results. In this, the patient was buried in soft mud, generally only the part affected, but quite frequently the entire body, and a fire was lighted upon the mud. When the limb had baked sufficiently, it was removed and vigorously massaged. It often happened that the skin was blistered from the flesh, but that did not prevent the masseur from performing his duty. The limb was twisted and kneaded until the joints cracked under the manipulation, but the patient grated his teeth and bore the pain with stoicism.

I have mentioned the application of direct fire in another chapter. This was usually the last resort of the "tu-at" to exorcise the evil spirit, but once in a while the Indian applied it himself. In cases of syphilitic and scrofulous ulcers, I have seen them rake a live coal out of the fire and place it upon the ulcer. The effect can be better imagined than described. The Indian would sit and watch the sizzling flesh as though he were enjoying a great treat.

They never, to my knowledge, used water, as such, as a means of curing disease. While the Indian frequently bathed, he never seemed to realize the therapeutic value of water, either hot or cold.

The pharmacology of the Nez Percés Indians was most primitive, and I have often regretted that my knowledge of botany was insufficient to enable me to recognize the few roots and herbs employed by them as medicines.

The principal medicine used by them was an ointment composed of balm of gilead buds boiled with deer suet. This ointment was used as an embrocation in rheumatism, as a dressing for burns, a salve for cuts and wounds. In burns, there has never been found anything equal to it—that I can testify to from experience.

Boils, abscesses, carbuncles, and ulcers were treated with poultices made from various leaves, generally skunk-cabbage, white plantain, and a wide-leafed plant, resembling coltsfoot, only larger.

A cough syrup was made from the buds of the white cedar, the inner bark of the larch, was used, and an emulsion was frequently made from the balsam of the white fir.

Constipation was relieved by a decoction of Oregon grape-root and one of the root of the colomo.

Diarrhea was cured by a decoction made from the root of a large red flower that very much resembled a wild pink, only much larger. I have never succeeded in learning the name.

What Some Men Have Coughed Up

Or What the Sputum Examination Reveals

By B. G. R. WILLIAMS, M. D., Paris, Illinois

EDITORIAL NOTE.—This is the fourth paper in Dr. Williams' series on "Surprises, Delights and Curiosities Encountered in Medical Laboratory Work," which began in our February number. The laboratory is becoming a factor of constantly increasing importance in the practice of medicine. It is essential that the general practitioner should understand its revelations.

IV

"THE chief delight," suggests one of my anticipative colleagues, "which a patient may cough up is payment for professional services rendered." Quite true, perhaps, so far as delights are concerned, but what concerning the surprises and curiosities?

I once examined a biologic specimen which I wish every reader of CLINICAL MEDICINE could have seen. The patient had been treated, so he claimed, three months for "congestion of the stomach." Five minutes after making this statement, he raised some sputum, and from this sample I recovered several small pieces of his lung. A microscopic examination showed the presence of hundreds of Koch's bacilli. This patient had coughed up what indeed was a surprise to him. He may have been disappointed at the time, but he was a man of intelligence and used this knowledge wisely. Hence, the examination proved a delight.

And what shall I say concerning curiosities? In this connection, it might be well to speak of a curious condition which I have observed and to which many other physicians have likewise directed my attention:

Great difficulty often attends the procuring of a sputum sample, and for this there are several reasons. The laity fails to understand or to appreciate the difference between sputum and saliva, while some patients fail to comprehend the inestimable value of the sputum analysis. But a far greater reason exists.

The patient who fears that he is affected with pulmonary tuberculosis shuns the truth. Why? We do not know. Strange to say, the man who is not affected by tuberculosis spares neither effort nor expense to prove to himself and to his friends that such is the condition, whereas the man dying from consumption argues that a bronchitis, asthma or dyspepsia explains all his symptoms and confidently plans a complete convalescence. Osler, quoting from older writers, refers to this condition as the spes phthisica. It has been hinted that it is a psychosis. Others seem in-

clined to the opinion that the tubercle bacillus loosens a chemical substance into the blood, which intoxicates the patient, giving him a feeling of "well-being."

Whatever the cause, we are forced to acknowledge that the same attitude in regard to the collection of the sputum sample is sometimes assumed by the non-tuberculous individual. One man frankly informed the physician that he did not care to submit the specimen, believing that he had tuberculosis and "dare not be told the truth."

A man once informed me over the telephone that he had coughed up a piece of his lung as large as a pea. Within a few minutes, he excitedly arrived at the laboratory with the supposed piece of his anatomy. A hasty examination revealed a gray or cream-colored piece of tissue which could not easily be teased apart. A microscopical examination of a section demonstrated voluntary-muscle fibers, while a chemical test showed that hydrochloric acid was present. This man had eaten steak for dinner. He was affected by influenza at the time and had violent fits of coughing. It was difficult to convince him that regurgitation from the stomach must have taken place.

Now and then we run across a case of consumption which has continued for many years. The patient coughs and raises some sputum, but otherwise apparently enjoys good health. Several years ago he was told (he laughs to think how that doctor missed it) to prepare to die. True enough, some of these cases are actually "tuberculous," notwithstanding the delayed progress of the disease, but in many the bacillus of Koch can not be found in the sputum, nor has it ever been present. Chronic putrid bronchitis is more probably the diagnosis. In the future, physicians will insist upon the examination of every questioned sputum, for the protection of their own reputation as well as for the benefit of their patients.

Negative and Positive Reports

The reader not accustomed to making these examinations might conclude that the only important pathological element to be found in the sputum is the tubercle bacillus. Indeed, too many laboratory workers, I fear, express the sputum report in one word: "positive," or "negative."

A positive report gives us no diagnostic information, except the fact that Koch's bacillus is present: it makes no attempt to reach a possible prognostic conclusion.

The ease by which a secondary infection may be diagnosticated or ruled out is at times startling. A sputum showing a purulent rather than a mucopurulent character and the presence of polymorphonuclear leukocytes undergoing hydropic degeneration would indicate that chills, afternoon fever, and night sweats are already established.

Proving Secondary Infection

What about other microorganisms? True enough, mouth germs may contaminate a sputum, and so, for this reason, I have come to recommend the use, when possible, of the method outlined below.

Instruct the patient to wash out his mouth before coming to the laboratory. For this purpose warm water containing sodium bicarbonate is excellent. Special attention is given to the teeth and to the surface of the tongue, the former (but not the latter) being briskly brushed. Then repeatedly gargle and rinse the mouth and the throat with this solution. The sputum is hawked upon the posterior portion of the surface of the tongue and held in that position. Immediately, the worker selects a portion of this from the interior of the mass, by means of a large pipette (a suitable medicine dropper will do), taking care not to touch the surface of the tongue or that portion of the sputum in direct contact with the mucosa. This pipette should be sterilized by a thorough boiling just before using it. Make spreads on sterile cover-glasses and examine by approved methods.

When such a preparation shows countless hundreds of staphylococci or other microorganisms—in apparently pure culture—I believe that little doubt exists about their coming mainly from the lungs. For routine purposes, I believe that this special technic is unnecessary in every instance. A good

mouthwash may be advised, however, before collecting any sputum.

A sputum which shows any or all of the following elements is doubtless a primary tuberculous infection: Proportion of mononuclear cells about 5 percent of the white cells; erythrocytes, fibrin and epithelium containing blood-pigments; elastic tissue; lung-stones; tubercle bacilli.

Technically, a true sputum in quantity sufficient for examination is pathological; a negative report would be incorrect. Saliva is not negative sputum. I am willing to concede that, in actual practice, certain nasal and pharyngeal secretions are differentiated with difficulty or not at all from those of bronchial and pulmonary origin. Nevertheless, I cannot consider the terse "positive" or "negative" as complete sputum reports.

An Inconclusive Report

I recall one of these "negative" cases and a review of the history may interest the reader. The specimen was from a lady who coughed up fresh blood upon lying down, but who suffered little inconvenience during the day while upon her feet or when seated. So far as acid-fast bacilli were concerned, this would be termed a negative sputum. I had been informed that valvular lesion and aneurism seemed to have been ruled out by physical examinations. But we in the laboratory overlooked very important elements. For had we examined more closely those cells which we classified as epithelial in origin, supposing them to be normal and from the mucosa, we should have noticed peculiar sponge- and basket-like forms of various sizes and shapes, mitotic figures and cell inclusions. The patient died from a cancer. Although our error in this instance did not hasten the fatal issue, it should not have been made.

Another negative sputum—and one I find recorded in my books—will show the value of the identification and classification of all sputum-elements. The specimen in mind was spread on cover-glasses, stained, and mounted for examination. A careful search of three such preparations showed nothing pathological and record was so entered. With no special object in view, I placed the fourth preparation on the stage of the microscope. The first field contained six acid-fast bacilli and as many more were found in the smear.

The Insidious Parasitic Tubercle Bacillus

The tubercle bacillus is a true parasite. The germs of the acute infections attack boldly, are overcome at once or wage a desperate and aggressive fight. But Koch's bacillus enters the lungs silently and lies in hiding seeking vantage-ground; waiting and waiting for days, for months, or perhaps for years. And when it obtains a slight foothold, it struggles to attain a greater one. And thus, for indefinite periods of time, it may be slowly gaining ground without evoking one symptom. As a sneak the bacillus enters: as a sneak it leaves. The patient may have received careful treatment, is perhaps gaining weight, symptoms are gone.

Has a cure been effected? Has he rid himself of this little rod? Examine his sputum! And here let me add that the repeated systematic examination of the sputum in those convalescing from this disease, is of much greater importance than the initial test for diagnosis. I know several people who show hundreds or thousands of these bacilli in their sputum although they are gaining in weight and the fever and its coincident manifestations have disappeared.

The tiny, but mighty, enemy has been caught in his mischief; and though soundly thrashed, is by no means conquered. Keep after him. Gradually he begins to yield, his numbers fade away, his length increases as his virulence is lessened, and peculiar dwarfed or involuted forms are noted—Schrön's capsules. Once exalted, he becomes attenuated; but show him no mercy, for he still retains that cowardly nature which characterized him. Give him but the opportunity, and he will accomplish even greater harm than before.

For this reason, *never discharge a patient as cured, whose sputum shows a single acid-fast germ*, no matter what favorable symptoms are present.

I have examined other sputums: patients have coughed up certain elements leading to the diagnosis of valvular lesions, of

bronchiectasis, of pulmonary gangrene, and so forth. A study of a large number of specimens tempts me to conclude that perhaps, after all, the sputum analysis gives us a definite diagnosis much more frequently than does a systematic examination of the urine. Do both, but omit not the former in any ailment where tuberculosis might, by the barest possibility, be the cause In this connection, recall that gastrointestinal disturbances, loss of weight, pallor, cardiac palpitation, amenorrhea, and many other serious manifestations may have continued for months before the least suspicion may be directed toward the lungs.

The next paper will consider "Instances Where Gastric and Fecal Analyses Have Interpreted Baffling Symptom-Complexes."

The Immediate Treatment of Congenital Talipes

By RALPH ST. J. PERRY, M. D., Parkers Prairie, Minnesota

ANY physician engaged in general practice is apt to encounter a case of congenital club-foot at any time. Unfortunately for the baby involved in these cases, quite a number of the physicians who officiate at their nativity either do not know how to treat these cases properly, or else are too indifferent to give them the attention they need. Regardless of the opinions of others, my own conviction is that no child born taliped need grow to adult age, or even to childhood, suffering from this congenital deformity.

Even in those cases associated with spina bifida, where there is apparently very little hope of the child living, some effort should be made to better the child's condition, because not all such cases terminate fatally and the advances being made in surgical practice may yet bring us a remedy for the defective spine.

The Equinovarus Form of Talipes

The form of talipes most usually met with is the equinovarus, outnumbering the other varieties almost ten to one in frequency. The degree of deformity, and its fixity, vary according to the fundamental causes and the length of time these causes have been at work during the development of the child *in utero*. But, regardless of initial causes, we must still regard the infant's foot as made up of soft pliable tissues, capable of cultivation, development and training, and our efforts should be to encourage, assist and compel these several tissues to grow along normal lines of development.

Experience has shown that the untreated congenital club-foot tends to permanent deformity—there is no such thing as a club-foot getting well "of its own accord" or of the child "outgrowing" it. Quite the contrary, since every muscular action in the foot and leg tends to aggravation of the defect, and as the child learns to stand and walk the weight of the body further aids in developing a chronicity of the talipes. Not only this, but other deformity develops, i. e., muscular atrophy in the leg and a knocking at the knees.

Begin Treatment Immediately After Birth

The best time to begin treatment in a case of congenital talipes is at the time of the child's birth. As soon as the baby is washed it should be inspected, and should there be anything abnormal, arrangements should be made for proper treatment immediately. It has been my fortune to be the attending physician in four cases where taliped children were born. In each case I carried out the method of treatment herein outlined, and each individual is today in possession of normal feet. Three of them have been walking from seven to twenty years, the fourth one is still too young to walk.

As soon as the washed baby has been inspected and you notice the club-foot, or

feet, place a piece of heavy cardboard or pasteboard against the sole of the foot and mark upon the board the foot's outline. (See Fig. 1.) Measure also the distance from the sole to middle of the calf. Having done this, give the nurse particular directions about massaging the muscles of the leg in general, and especially

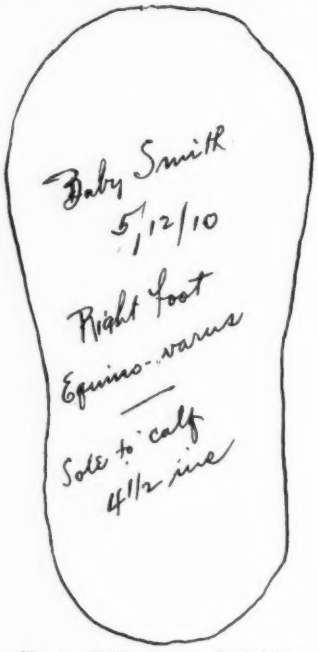


Fig. 1. Outline of the affected foot

those which seem to be weak or "paralyzed."

The Home-Made Club-Foot Brace

When you get back to your office take your outline marking of the baby's foot and smooth its contour up and convert it into a pattern by adding little offsets, as shown in Fig. 2, to which we later attach the leg uprights and the elastic-band artificial muscles. From your tinsmith get a small sheet of perforated strainer-tin (Fig. 3) and to this transfer the pattern, using a scratch-awl; and with a tinner's shears cut out the metal. This is to be the sole-piece of your club-foot brace. Around its edge run a binding of a narrow strip of zinc-oxide plaster to cover the sharp edge and prevent scratching or cutting through the padding. This padding consists merely of a thickness or two of chamois skin sewed directly on to the sole, the perforations affording passage for the thread.

In each of the offsets punch properly sized holes (as shown in Fig. 2), flatten the edges and smooth them off with a small fine-cut rat-tail file. Now take two bicycle spokes and cut them to proper lengths to reach from the sole to the middle of the calf. (This measurement you took when you drew your outline of the baby's foot. Measure from the headed end of the spoke.) Now, with your pliers bend the offsets up to an upright position, i. e., at right angles to the sole-piece, then slip the spokes through the holes in the two ankle offsets so the heads will come on the inside of offsets. These holes should be just large enough to allow the spokes to play freely, but not too loosely, therein. On your bench anvil flatten the upper end of these spokes, or uprights, laterally; then cut another piece of perforated tin one-quarter of an inch wide and long enough to pass

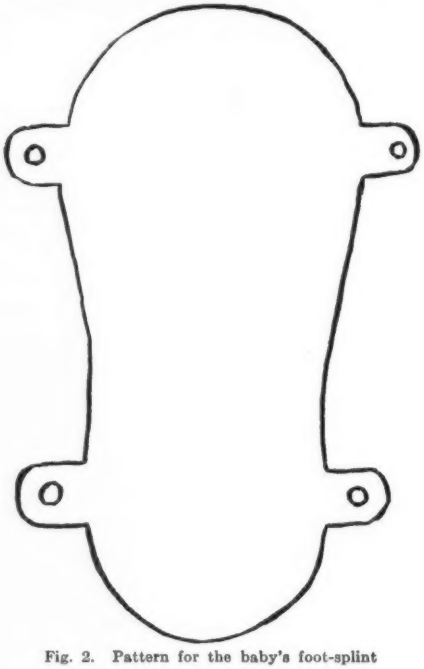


Fig. 2. Pattern for the baby's foot-splint

half way around the leg and shape it into a semicircle. Solder the two uprights to this with the flattened parts on the outside of the semicircle, the latter forming the posterior half of the circle.

This is now padded with chamois skin and small hooks (the masculine half of dressmaker's hooks and eyes) are firmly sewed at each upright on the *outside* of the padded circle. Two pieces of half-inch tape are now sewed across the bottom

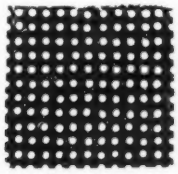


Fig. 3. The perforated metal

of the sole piece, one at the heel and one at the ball, each piece being long enough to bring up over the top of the stockinged foot and tied with a bow-knot. Also a piece is sewed around the outside of the metal band at the calf. This completes the brace, as shown in Fig. 4.

The Application of the Brace

To apply the brace, place the sole flat against the sole of the baby's foot and tie in place, using such gentle force as may be necessary to do this. A snug-fitting stocking should have been put upon the foot and leg. Now gently bring the foot into a normal relation with the leg, slip the uprights into position and fasten there by tying the upper tapes. Finally, take suitably sized elastic rubber bands, loop them through the holes in the anterior offsets and catch the free ends in the hooks in the calf-band.

This form of brace can be made by any physician of ordinary mechanical ability in a few hours' time. It is plenty strong enough for its purpose and can be put on or taken off in a minute by the nurse or mother. There is nothing complicated about it to get out of order; nothing to injure the baby or its clothes; it can be worn day and night; it is too cheap to worry over financially, and hence can be thrown aside, when no longer needed, without any qualms or pecuniary wailings.

The massaging is to be kept up daily until baby is able to walk with its feet in a normal condition, and it is surprising how readily these cases will amend themselves through a proper course of treatment. Within a few weeks the mother will joyfully tell you that baby's feet are almost well, and you will have a regular (or irregular) fight to get her to keep the braces on sufficiently long to secure permanently beneficial results. Impress upon the parents that in these cases, more than any other, "keeping everlastingly at it brings success."

The brace herein described is for the equinovarus form of talipes, but the brace can be changed to fit any form by merely changing the position and direction of energy of the elastic bands which act as artificial muscles. The ankle joints of the brace are sufficiently free to permit of quite a degree of lateral motion, if necessary, in case of valgus or varus to use special lateral traction.

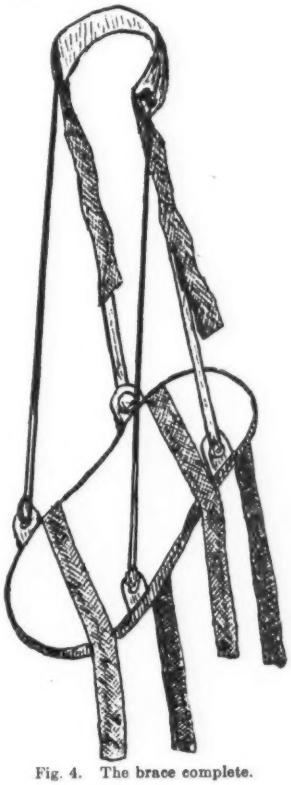


Fig. 4. The brace complete.

The General Practitioner as a Gynecologist

Everyday Helps for Routine Work

By GEORGE H. CANDLER, M. D., Chicago, Illinois

VI

NONMALIGNANT tumors and cysts of the vulva are rarely encountered. Occasionally, however, cysts of the mons veneris or labia grow large enough to cause trouble. Excision is the only remedy and the operation can be readily done under local anesthesia.

The Removal of a Genital Cyst

Great care should be taken to dissect out the cyst walls. If for any reason the sac cannot be removed entire the cavity should be curetted or the galvanocautery used. Such vulval cysts usually contain a peculiar greenish fluid, but occasionally a pultaceous mass will be evacuated.

Small translucent cysts of the labia minora sometimes cause infinite annoyance and even, if excoriated, severe pain. To empty the sacs will not suffice; the cysts should be carefully excised or, if the involvement is general, the labium itself extirpated. Hemorrhage is generally free and the operation should not be attempted at the office.

Cysts of the clitoris may also necessitate a cliterodectomy, but before resorting to the knife the sac may be emptied and the interior swabbed with thuja. Light pressure should be maintained for a day or two.

Vulval cysts may reach the size of an egg or orange before causing sufficient annoyance to render medical attention desirable. The mere weight of the mass may render walking difficult or the growth may interfere with coitus. In two cases treated by me the tightly fitting union underwear had abraded the surface and infection naturally followed. Despite every precaution, in one instance streptococci gained access to the cavity and postoperative conditions were serious enough to necessitate the attendance of a nurse for two weeks.

It is well, before making *any* incision about the vulva, to clean up vigorously and then rigorously to maintain surgical cleanliness of the parts. It is perhaps hardly necessary to state that the operative field should be shaved. If the patient suffers from gonorrhea or a purulent vaginal discharge, do not operate until such conditions have been controlled. It is also wiser to treat any ulcerated surface with antiseptic dressings for a few days prior to opening a cyst.

Other Common Tumors

Fibroma, myxoma and myoma are readily recognized. Growths which attract little or no attention, ordinarily, may assume large proportions during pregnancy, and as they interfere with delivery should be removed early whenever possible. Pedunculated tumors are easily extirpated, but sessile growths must be dissected out with care. Be sure that any pedicle is securely ligated, especially if the patient is not under the care of a trained nurse. Some extremely alarming hemorrhages have followed the slipping of ligatures. It is well to make a point of passing the needle through the pedicle and tying off each half separately.

If a lipoma is found in a young woman who will in all probability become pregnant, operation should be insisted upon. The present size of the growth may be insignificant, but it is apt to increase in size, *pari passu* almost, with the gravid uterus. The skin overlying the lipoma is peculiarly prone to ulceration, and several fatal hemorrhages from such a seemingly trivial lesion have been reported.

Physicians doing surgical work extensively or having hospital facilities will, of course, have their own methods of dressing operative wounds of the external genitalia, but the doctor who has to deal with such conditions in private homes none too well

equipped may be interested in the description of the procedures I have found most effective.

How I Handle an Operative Case

The mons veneris, vulva and perineum are shaved twenty-four hours prior to the operation and washed thoroughly with ethereal tincture of soap or some similar preparation. Lysol in hot boiled water serves excellently. The woman is ordered to douche the vagina with an astringent antiseptic solution twenty-four hours, twelve hours, and again immediately before ascending the operating table. The lower bowel is also washed out with warm soap and water.

The skin for several inches beyond the line of incision is painted over every three or four hours with a dilution of echinacea and thuja (one ounce of equal parts of their alcoholic preparations to two ounces of cinnamon water) and covered with borated gauze. When ready to operate the physician removes this dressing and scrubs with a brush—using an antiseptic soap—all the skin surfaces, employing for the mucosa small mops of gauze. Great care should be taken to cleanse thoroughly the introitus and upper angle of the vulvar cleft. It is desirable to plug the vagina and cover the clitoris and urethra with bichloride gauze. The line of incision is painted with tincture of iodine.

After the operation is performed (it is of course out of the question to dwell upon this part of the subject here) the wound is dried thoroughly with pledgets of gauze and the surface painted with the liquid that results when one part of carbolic-acid crystals is rubbed up in a mortar with two parts of camphor. Particular care is taken to rub this fluid into the sutures. Two or three thicknesses of gauze saturated with an antiseptic oil are applied and covered with a suitable pad of plain sterile gauze and cotton.

Power Undesirable—Use an Antiseptic Oil

Powders are (in this particular locality at least) extremely undesirable. Dry dressings would, of course, serve were the patient under a nurse's supervision, but at home dry dressings of the vulva soon become wet—and infected. The oiled gauze protects the lesion from discharges (vesical and vaginal), inhibits germ growths and unquestionably hastens healing. Moreover, it very markedly alleviates, if it does not prevent entirely, postoperative pain. The oil I prefer consists of a vegetable base containing camphor, menthol, oil of tar, eucalyptus, cinnamon, and thymol iodide. For infected wounds oil of thuja may be added. The dressings should be changed three times the first day, then twice daily.

If the pelvic organs or vagina are diseased and acrid, or purulent discharges exist, the lower part of the vaginal canal should be washed thoroughly with a weak iodine solution, and a lysol douche given through a recurrent tube, the idea being, of course, to prevent the fluid from coming in contact with the wound. After the douche a long strip of gauze, buttered with vaseline and powdered with a nonirritant, alkaline, antiseptic powder, should be applied snugly into the fornices and made to fill partly the vagina. If the end is brought out a pad of cotton should always be placed between it and the dressing.

When Gonorrhea Complicates

Should a gonorrhea be present, great care must be taken and the parts cleansed with a solution of the preferred silver salt; protargol, argyrol, and largin are all satisfactory products, and preferable in many ways to silver nitrate. Of late I have used a combination of mercury bichloride and methylene-blue, with perfect results. The one objection to this solution is its staining property. A convenient formula is: Mercury bichloride, dr. 1; ammonium chloride, dr. 1; methylene-blue, gr. 1-6; water, ozs. 8. One ounce of this solution is added to two quarts of hot water and the dilution used locally on swabs and as a douche.

If there is a moist condition of the external genitals a dusting power of stearate of zinc and balsam of Peru proves useful. Boric acid, oz. 1; salicylic acid, grs. 5; starch, oz. 1, is another effective dusting powder. One dram of orthoform to the ounce of boric acid makes an excellent anodyne application.

If, despite all precautions, infection occurs, gauze saturated with this solution should be applied: Echinacea, ozs. 2; thuja, ozs. 2; zinc sulphate, grs. 30; distilled water, ozs. 12. Diluted again with equal parts of water, this makes an ideal lotion for use in any vaginal disorders which cause a profuse, foul discharge. It may be applied on gauze after a lysol douche, or the vaginal mucosa may be swabbed thoroughly therewith.

In the next article in this series treatment of malignant and venereal growths will be considered.

Gelsemium and Gelseminine

Their Physiological Action and Therapeutics

By H. HAMILTON REDFIELD, A. B., M. D., Chicago, Illinois

Professor of Therapeutics, Bennett Medical College, Medical Department of Loyola University

GELSEMIUM SEMPERVIRENS, THE PLANT

COMMON names of this plant are: yellow jessamine, jessamine, Carolina jessamine, wild woodbine, white poison-vine, white jessamine, yellow jasmine.

Source and Composition: The official preparations of the U. S. Pharmacopeia are made from the rhizome and rootlets of gelsemium sempervirens, a vine belonging to the natural order of Loganiaceæ, having as its habitat the southern states, where it is found growing in great abundance in the swamps, woods and thickets from Virginia to Florida. The dominant action of the plant is due to the presence of the alkaloid gelseminine.

Preparations: The preparations of gelsemium are:

Fluid extractum gelsemii. Dose, 5 to 30 drops.

Tinctura gelsemii (10 percent.). Dose, 15 to 30 drops.

Gelseminine hydrobromide. Dose, 1-250 grain.

Gelsemoid (concentration). Dose, 1-128 gr.

The History of Yellow Jasmine

No mention of gelsemium is to be found in the works of Barton or of those who were contemporaneous with him; but in 1830 we find it mentioned by Rafinesque, who, in an old English botany, states, in connection with its uses, that its "roots and flowers are narcotic, and goes on to say that "their odor or effluvia may cause stupor" and that a "tincture of the root is used for rheumatism in frictions," a statement that can be seen, by those who are familiar with the early therapeutic or botanical literature, to have been taken almost literally from Elliott's "Botany of South Carolina and Georgia," published in 1821.

According to King, the medical record of the plant is associated with an occurrence in the life of a southern planter who was suffering with a fever, and who was attended during his illness by a faithful old body-servant, who, actuated by extreme desire to be of any service to his master, by mistake prepared and gave to him a decoction of gelsemium root in place of that of a garden herb that had been ordered by the family physician. The symptoms which followed this mistake on the part of the old negro were exciting in the extreme. There was immediate loss of all muscular power or control, the eyelids drooped, and to the onlookers it seemed that death was but a question of moments. However, the effects gradually disappeared, and the patient recovered free from the fever, the latter not returning.

This incident was taken as a hint by an observing physician, who prepared from gelsemium a remedy to which he gave the name of "electrical febrifuge," the use of which brought him much fame and distinction. The name of the drug, however, was not given to the profession until the appearance of King's "American Eclectic Dispensatory," in 1852, when he presented it to the medical world, accompanied by a

statement similar to the one given above.

The article of King's concerning gelsemium was copied in detail by the U. S. Dispensatory in 1854, this being the first of the editions of this work that had given any mention of the drug, but the fact that, in 1849, Porcher, in an article to the American Medical Association, had called attention to the local use of gelsemium in the treatment of gonorrhea and rheumatism, entitles him to any credit which may attach by reason of being the real primary advocate of the use of this plant. In this article Porcher referred his auditors and readers to Frost's "Elements of Materia Medica," which was of an earlier date. Gelsemium remained almost the exclusive property of the Eclectic school, following the year 1852 (the date of King's Eclectic Dispensatory), until 1860, when it was finally given mention in the U. S. Pharmacopeia; not being accorded the dignity of having any official preparations, however, until 1880.

The name gelsemium is taken from the Italian word "gelsemino," meaning jasmine. This terminology is, indeed, unfortunate, for, as pointed out by E. M. Holmes, of London, there is no true species of gelsemium having yellow flowers. Through long usage the name gelsemium has, however, become firmly associated with the drug, and must abide, however glaringly unbotanical it may be.

Description of the Plant

The rhizome and root of gelsemium, from which the official preparations are made, are extremely tough, woody, and, when dry, very brittle. The size of the rhizome may be one or two inches in diameter, and from one to four or five feet in length. The stem-base carries a knot sometimes five or six inches in circumference and weighing from one-half to one pound. Externally, the rhizome is brown; internally, white. Upon chewing, the bark imparts a bitter taste, but the wood, being almost entirely devoid of virtues, is tasteless.

GELSEMININE: PHYSIOLOGY AND THERAPY

Gelseminine is a motor and a respiratory depressant, manifesting its action principally upon the anterior cornua of the cord. Its direct action is upon the central nervous system. Its action is to diminish, or decrease, the supply of blood to the brain, which is brought about by a lessening of nerve power, or an inhibiting action over nerve control. It slows, retards or inhibits the functional activity of the governing centers over the nerves themselves, and has a tendency to restore, or bring them back, to their proper physiological functioning.

Possessing, as it does, this regulating action upon the nervous system, it manifests a subduing influence on every form of nervous excitation, irrespective of the character or location, be it direct or reflex. To sum up in a few words, gelseminine inhibits excessive nerve action.

Given in excessive doses or for a long period of time, it is productive of dizziness, ambylopia, double vision, dilated pupils, drooping of the eyelids (due to paralysis of the levator palpebræ superioris muscle), and an inability to keep the mouth closed. There is a reduction of body-temperature, the pulse becomes less frequent and its force is reduced, while respiration is accompanied by great effort, dyspnea being present. The gait is staggering, there is exceeding muscular weakness, profuse sweating, loss of speech, and finally death, due to a paralysis of the muscles of respiration—consciousness being maintained until the onset of carbon-dioxide narcosis.

While gelseminine lowers the rate of the heart-beat, it does not act as an arterial depressant, neither has it any irritating effect upon the gastrointestinal tract. Given in moderate doses, the effects pass off in about three hours.

Bearing ever in mind the primary physiological action of the drug, we see that the typical clinical picture calling for its exhibition must be one in which we find evidences of increased nerve tension, accompanied by a consequent irritation, and in the major portion of cases local hyperemia, or an increased or undue blood supply occurring in sthenic conditions. Asthenia would be a contraindication to its use singly, although in these cases it can be given with the same assurance of results as can aconitine in asthenic fevers, when

combined or guarded by such remedies as digitalin, brucine or strychinne.

The Therapeutics of Gelseminine

Gelseminine exerts its best effect in those cases in which the symptoms show a condition similar to the one above described, namely, acute determination of blood to the brain—acute cerebral hyperemia—such conditions usually being manifested by typical physical signs or symptoms, such as the appearance of the face, which is flushed, the eyes being bright, pupils contracted, and the patient extremely nervous and irritable. Accompanying these, there is a high degree of nerve tension, with its accompanying irritation and increased heat of the head and face. In acute cases, the temperature is elevated, the skin is hot and dry, the pulse is quick and sharp but not necessarily hard.

Taking into consideration the above, the question arises, in what conditions do we meet with a clinical picture that corresponds to the above? The answer is simple: In the acute febrile conditions of children. Here, as a general rule, we find all these symptoms clearly depicted, and it is in these patients that gelseminine exerts its most beneficial influences. Given a case of any of the acute diseases of childhood where the above conditions prevail and are accompanied by muscular twitchings, and the exhibition of gelseminine is demanded, as there is no agent in all our armamentarium that is more reliable or invariable in its action than is this agent.

Should spasms occur during the course of treatment, the size or frequency of the dose should be immediately increased, and it will be found that, in a vast majority of the cases, this is all that is needed to bring about an amelioration of the conditions.

Nervous women, children, and young persons seem to be especially susceptible to this remedy.

It is of great service in onanism occurring both in males and females, also for hysterical women, especially when the patient has spasms or complains of a sensation as of a lump in the throat (globus hystericus), palpitation of the heart, the extremities numb as though paralyzed, the urine profuse, clear, while the patient is apprehensive and worried.

During confinement when the os is rigid and labor is retarded, with the patient highly nervous, the exhibition of gelseminine in conjunction with caulophyllin will be productive of excellent results.

Relaxed, irritable cold genitals in the male call for this remedy. There are nightly emissions without an erection, and the patient does not awaken from sleep when ejaculation takes place, but awakes in the morning to find evidences of the night loss in the stains upon the night-clothing and himself completely exhausted and nervous.

Spasmodic coughs that withstand the action of hyoscyamine, cicutine or macrotin often are cured by gelseminine in frequent doses. Here the underlying cause is nervous irritation, a condition in which this remedy is the peer of all others.

Useful in Pneumonia, Neuralgia and Other Affections

In pneumonia or pleuritis—provided the heart is not weak, which would contraindicate its use unless properly guarded—it is one of the best agents we can select, and should be given to full physiological effect.

Having a selective action upon the fifth nerve and ramifications, it is especially uesful in the treatment of the neuralgias of this nerve.

It is preferable to chloral or the bromides in the treatment of insomnia or delirium tremens, and enjoys an established reputation in cases of tetanus.

Incontinence of urine occurring in women, when this condition is due to a paralysis of the vesical muscle-fibers, is cured by gelseminine.

In ovarian neuralgia, when the patient complains of dull bearing-down pains in the ovarian region, gelseminine acts in the nature of a specific, and its exhibition is invariably followed by relief.

In acute cerebral, spinal, cerebrospinal or meningeal inflammations, the symptoms for gelseminine medication are generally marked at the onset, and it is at this period of the disease that it gives the best results.

Given in the later stages, when relaxation has occurred and the case has passed into the asthenic stage, it would not be productive of the marked and brilliant action that it gives in the early stages.

Its place in the treatment of puerperal convulsions is side by side with that of veratrine, here in order to obtain the best results it should be given hypodermatically and to full physiological effect. True, the symptomatology of veratrine is more pronounced here than is that of gelseminine, by reason of the unlocking of the secretions by the former drug, and the imperative demand for immediate and thorough elimination, yet, for the spasmodic condition, gelseminine exhibited hypodermically until the full effect of the drug is apparent is good treatment, and should be resorted to whenever the occasion seems to demand it.

When Aconitine and Other Drugs Are to Be Preferred

Inflammatory conditions occurring within the chest do not as a rule indicate gelseminine as much as they do aconitine, bryonin or asclepidin, yet there are certain conditions, such as whooping-cough, laryngismus stridulus or asthmatic paroxysms, in which its symptomatology is sufficiently marked to justify its exhibition.

In the treatment of rheumatic conditions of the muscular structures of the neck, given in connection with bryonin, rhus toxicodendron or macrotin, according to the character of the pain, it completes the most effective treatment that can be instituted.

The treatment of acute nephritis without gelseminine would acquire a far more serious aspect than it now possesses. Here it meets a wider ranger of symptoms in a more pronounced and satisfactory manner than any other agent. It quiets the excitement of the nervous apparatus of the urinary organs, causing an increase in the amount of urine voided, the fever is decreased, the nervous symptoms abate, arterial tension is reduced quickly, and spasms are controlled. Here, as in the treatment of scarlatina, it seems to anticipate the uremic conditions and to prevent their occurrence.

Contraindications to Gelseminine

Congestion, either of the nerve-centers alone or occurring in any other organ. Dulness, hebetude, obstructed circulation (local or general with normal or falling temperature), asthenia—these must be given attention with the direct antithesis of gelseminine, unless, as before stated, it be accompanied by such remedies as digitalin or strychnine.

In the treatment of chorea, the writer considers it superior to the old-time tried "Fowler's solution." It can be given in full doses, and there need be no apprehension as to any cumulative action, which is so apt to occur when arsenic is used. I have given it in over one hundred cases of this disease, using it either with macrotin or cicutine, thorough elimination, and above all else, intestinal antisepsis, and have, as a result, a long list of grateful parents and cured children.

The following remarks on the uses of the root, taken from Scudder's "Specific Medication," sum up concisely the exact application of gelseminine:

"Gelsemium exerts a specific influence upon the brain and to a less extent upon the spinal center and the sympathetic. It relieves irritation and determination of blood and the disordered innervation that flows from it. Probably there is no remedy in the materia medica that is more direct and certain in its action. Given a case of irritation and determination of blood to the brain, marked by flushed face, bright eyes, contracted pupils, restlessness and irritation, we prescribe gelsemium with a certainty. This being a common complication of the diseases of childhood, it is essentially the child's remedy. Acting in this direction, it lessens the frequency of the heart's action, and removes obstruction to the free flow of blood—a sedative. It also increases secretion in the same way."

It is a remedy which deserves close and careful study, and its action should be faithfully noted, and the specific symptoms calling for it present whenever it is exhibited. Used under these conditions, it will never disappoint, and will make easier the treatment of numerous conditions which now present difficulties.

Sanatoriums for Physicians and Their Families

Shall We Seek to Establish Them?

By T. D. CROTHERS, M. D., Hartford, Connecticut

WHILE the number of those physicians who become impoverished in the declining period of life and have to depend upon charity is small, the wives and children of physicians cast into the cold, unfeeling world by the death of husband and father are many, indeed.

A sanatorium that would take in these deserving ones and give them a home is one of the great charities to come. Every physician should feel that a work of this character should receive his warmest encouragement and constant endeavor to promote. If every physician will give to such an undertaking but one-fourth of the time that he spends in the promotion of hospitals and charity work, it will return a rich blessing to physicians and their families who are now unprovided for.

One physician, of whom I know, who had spent thirty years in active service and in continuous efforts to promote and build up a city hospital, was stricken with paralysis and, after lying six months or more in the hospital, was transferred to a county almshouse as incurable. The authorities of this hospital, and even the physicians doing his service there, thought it a good stroke of business to have him taken to an almshouse and thus relieve their institution of the burden of caring for this invalid—their benefactor—while he lived.

In another town a certain physician, who had given the best years of his life to build up a local hospital and had spent a great deal of time attending its inmates, fell victim of typhoid fever, and was taken to this selfsame hospital for treatment. Six months afterward the hospital management presented its bill and insisted upon payment. The physician was unable to pay, and his property was attached. These two incidents are by no means exceptions, and they show a degree of heartlessness for which physicians themselves are to blame.

It should be fully understood in every hospital where a physician gives gratuitous services for a term of years, that, in case of sickness or injury, he is to receive gratuitious service, even, if need be, to the end of his life. Every hospital should incorporate this in its by-laws, and any staff-physician should feel, in his efforts to help on the institution, that he is providing for an emergency that possibly may confront him in the future.

Once a prominent surgeon was invited to take service in a leading hospital. He declined, unless some provision were made for his own care and treatment there should anything happen. The board thought this an imposition and refused. As a result, he was not put on the staff. Had the physicians been united and insisted as a recognition of their service, on the free care and attention in the hospital, an additional incentive would be given for lending aid.

Many physicians, through pride, prefer not to go to the hospital where they have been giving the best services of their lives and ask for charity, hence they suffer at home. This is a great mistake. The members of the profession should insist that public and private hospitals accord them appropriate personal service in emergencies, and they should have the free entrance and free care in return for what they do. After that, if the doctors of this country will turn their attention to the establishment of sanatoriums and hospitals for the care of their own families, a new charity will begin that will meet a most pressing want.

The New York Masonic Home not only takes care of indigent Masons themselves, but also of their wives and children, furnishing education and homes for the latter until they are able to support themselves. This is the ideal of what kind of homes

should be established in different parts of the country. Sanatoriums of this class in the neighborhood of large cities would be most practical charities, and physicians could without difficulty found them and thus provide for a class of stranded men and women, not numerous but urgently in need of assistance.

The estimate that ten percent of physicians dying in middle life leave wives and families unprovided for no doubt approximates the truth. Probably five percent of the physicians past the age of sixty years are distinct objects of charity and have to be supported by someone.

If a sanatorium could be provided to help this five percent, or at least to give them a home for the remainder of life, it would meet a want that is growing more and more apparent. A sanatorium on a farm, with proper buildings, in the neighborhood of a large city could be provided at a comparatively small expense. Physicians who have been prosperous would not only make endowments for such places but would urge others to do so, and, in a very short time, these sums would attain proportions of practical magnitude.

Donations by physicians to art galleries or libraries and other high-sounding efforts would take a new and more serviceable turn; the money then would go to sanatoriums, to care for the crowded-out and driven-out physicians and their families. Almost every physician in the country who has any money to give away would feel the pressure of this, above the demands of all other charities.

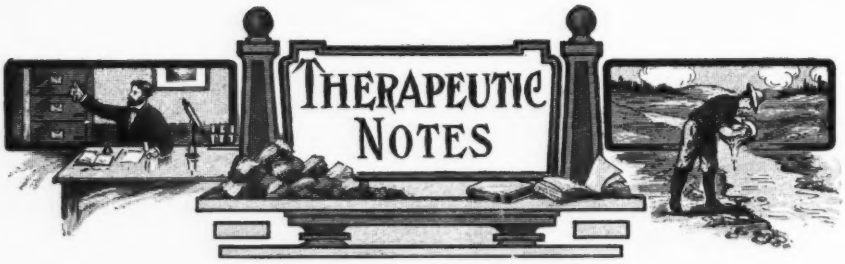
It is simply a question of helping our unfortunate brothers in the profession and their families, protecting them from the cold charities and in some way helping to overcome the sad losses of life. Every physician feels the need of help and sympathy to the deserving poor and probably gives more of time, services, and money than all other classes combined, not excepting the clergymen; and, yet, his own professional brethren, and especially their dependents, are without any special charity or means of assistance. Someone must lead—the response will be rapid and eager.

On the other hand, physicians who are doing charity work must demand of hospital authorities and charitable institutions some substantial recognition of their services, in the direction of free beds and free treatment, when the necessary occasion comes.

Most physicians shrink from accepting charity, and, yet, if the hospital were endowed with that idea of a free home for physicians, it would be accepted. If sanatoriums were opened for their families, much anxiety and worriment would be lifted and the work of the physician would go on with greater cheer, in the knowledge that, somehow, there would be provision for the future. This is a subject deserving the widest attention and discussion.

THE greatest man is he who chooses the right with invincible resolution; who resists the sorest temptations from within and without; who bears the heaviest burdens cheerfully; who is calmest in storms, and whose reliance on Truth, on Virtue, on God, is the most unfaltering.

—William Ellery Channing.



LOBELIA HYPODERMICALLY IN PAROXYSMS OF ASTHMA

Dr. F. G. Wachtendorf reports, in *Ellingwood's Therapeutist* for April, that he has obtained remarkable and practically immediate effects from the hypodermic injection of lobelia, in syringeful doses, in the paroxysms of asthma.

WHEN TO USE CREOSOTE IN PHTHISIS

Powell and Hartley, in their work on "Diseases of the Lungs and Pleuræ," say that remedies of the creosote class are of very doubtful value during the acute and actively hectic periods of phthisis, being more especially indicated as the hectic stage is subsiding and during the comparatively afebrile period.

CROTALIN TREATMENT OF EPILEPSY

Dr. Ralph H. Spangler reports his results in thirty-six cases of epilepsy treated with hypodermic injections of rattlesnake venom (*New York Medical Journal*, Sept. 9, 1911), and his conclusions are as follows: (1) The venom treatment is indicated in the socalled idiopathic form of epilepsy. (2) Under the crotalin treatment, the character of the convulsions is modified, the interval between the attacks lengthened, and the mental and physical condition of the patient improved. (3) It is important to use a solution of the venom of definite and uniform strength. (4) To determine the strength of dose necessary to cause a satisfactory local reaction, that will produce a systemic effect sufficient to control the convulsions, is most essential. (5) Experience and observation as to the character of the local reaction are of great value in determining the proper dose for each individual case. (6) An aseptic technic must be observed when giving the injections.

THE USE OF CACTUS IN EPILEPSY

Here is a new one about cactus, and yet not so new either, for the argument was perfectly sound and had occurred to others before now. Dr. N. W. Dewees reports (*Eclectic Medical Journal* for April) five cases of epilepsy, all in men between thirty and fifty-eight years of age, who had been suffering from epilepsy for years and who showed the unfavorable mental effects of the disease. Reasoning that, if cactus would control the nerve-force in functional disturbances of the heart, it would also control functional disturbances of the brain, the doctor put his idea to the test. He says that he has proved the soundness of it many times in the treatment of patients threatened with insanity, and is confident that cactus has saved more than one of his patients a trip to the mad-house. In his judgment, cactus equalizes the nerve-force in the body, promoting normal functional activity of the heart and brain. We should like reports of this use of cactus, or cactin, from our readers.

AMOUNT OF CAFFEINE USED

Sixty thousand pounds of caffeine are employed annually in drug form in the United States: and 16,248,221 pounds of caffeine (so we gather from *The Congressional Record*) are consumed in various beverages—tea, coffee, chocolate and cocoa. The great danger (if there is danger) from this alkaloid does not seem to be in the

amount of it used medicinally. Apparently it is one of the most natural and least depressing, in after-action, of heart stimulants.

PILOCARPINE IN THROAT AFFECTIONS

Dr. G. Merrill Hawkins (*Ellingwood's Therapeutist,* April) says that in cases of pseudomembranous inflammations of the larynx, pharynx and tonsils, after all other remedies had failed in his hands, and he had stopped them all, he gave 1-64 grain of pilocarpine nitrate every half hour, or more frequently, to slight perspiration or increase of salivary secretion, and beheld the white tenacious membrane disappear like the melting mountain-snows before a chinook wind.

INTESTINAL TYPHOID VACCINATION

Courmont and Rochaix (*Presse Méd.,* 1911, p. 53, Acad. des Sciences, April 24) succeeded experimentally in immunizing animals against typhoid fever by introducing into the intestines cultures of typhoid bacilli killed at 53° C. The administration by mouth did not give definite results, and the authors had better success with high colonic injections of the cultures to which a small amount of opium had been added. They found that in man three injections of vaccine, of 100 Cc. each, made at intervals of five days, are sufficient.

MENORRHAGIA IN YOUNG GIRLS

According to *Folia Therapeutica* for October (1911), Dr. Goerl recently reported to the Nuremberg Medical Society two cases of profuse menstruation in young girls, in whom examination failed to reveal any anatomical cause for the menorrhagia and who were rapidly and thoroughly cured by exposure of the abdomen to the Roentgen rays. Dr. Goerl suggests that the rays act on some toxin in the circulation, a substance which is allied to the normal internal secretion of the ovary and which is responsible for normal menstruation. He is, however, unable to explain the precise way in which x-rays affect the ovarian secretion.

ARSENIC FOR WORMS

A correspondent, a layman, got hold of the October number of our journal, and read the article on "Worms." He writes from personal experience.

When he was young, he tells us, he was troubled with pinworms, which refused to yield to the ordinary remedies. Having an attack of eczema at the same time, he was put upon Fowler's solution of arsenic. This solution not only relieved the eczema, but also caused the intestinal parasites to disappear. Usually ascarides are removed so readily by simple and harmless remedies that it would rarely be necessary to resort to arsenic. It is an old observation that these parasites do not thrive in the intestines of individuals who are taking iron.

TREATMENT OF LEG ULCERS

Dr. G. L. B. Rounseville, of Milladore, Wisconsin, writes us that he has been using the following combination successfully in the treatment of old sores of the leg and in varicose ulcers: Bismuth subnitrate, drs. 2; specific tincture of echinacea, drs. 2; petrolatum, oz. 1.

The doctor does not use soap or water, nor any antiseptic solution, but applies this ointment, covering it with gauze or wool lint, which is held in place with a roller bandage. After the "scales" have come off and the parts are clean he dresses the sore only two or three times a week, using elastic bandages, and in some cases the elastic stocking. Under this method ulcers of large area have made rapid repair and have healed without resorting to skin grafting.

THE TREATMENT OF ERYSIPELAS

Dr. W. P. Howle, of Charleston, Missouri, writes us that he treats erysipelas as follows: He keeps the bowels open with saline laxatives and internally administers a teaspoonful every two hours of the following mixture: Specific echafolta, drs. 2;

saturated solution of sodium hyposulphite, q. s. ad ozs. 4. Locally he applies a mixture containing 2 drams each of zinc oxide, bismuth subnitrate, and best cologne, in 2 ounces each of glycerin and lime water, making a 2-ounce mixture. This is applied every three hours. And it is a favorite with Dr. Howle in the treatment of skin diseases generally and erysipelas in particular. Sodium hyposulphite is another favorite, and the echafolta, while not used as long, he has found good.

We wish that Dr. Howle would add to this excellent treatment the use of pilocarpine hypodermatically in his sthenic cases. We also have much faith in tincture of iodine painted over and beyond the edges of the affected area, with a protective covering of flexible collodion.

SKIN DISINFECTION AND SURGICAL ASEPSIS

Dr. Gustavus M. Blech (*St. Louis Medical Review*, March) concludes, in the light of his experience with iodine as a skin disinfectant, that the Grossich method is far from being an ideal one, since it has failed to prevent stitch abscesses in clean appendectomies, extirpation of tumors and goiter. He has had far better results with the use of much green soap and very little hot water, followed by rinsing with alcohol.

The author believes that "there is no golden road of ease to the goal of asepsis, that no one chemical can aid us to achieve that result, that general care in preparation and minutiæ should not be relaxed for one moment, that it is unscientific, irrational and dangerous to 'destroy' actual dirt on the operative field by mere dry shaving and painting twice in a few minutes with the germ-killer (?) iodine in alcoholic solution."

TREATMENT OF PSORIASIS

Dr. Alexander Memelsdorf (*Medical Era*, 1911, November) says that arsenic is the remedy *par excellence* in the treatment of psoriasis, and that it can be administered for long periods without any ill effects, if given properly. While the preparation to be preferred is Fowler's solution, especially for children, administered in constantly increasing doses, the author sometimes administers a solution of arsenous acid hypodermically, giving 1-20 of a grain at first, increasing this gradually to 1-2 grain. "As a rule," he says, "the effect becomes evident about a week after the beginning of the treatment."

Memelsdorf's paper contains several other valuable suggestions on the treatment of psoriasis, but does not mention the importance of overcoming any autointoxication, especially of intestinal origin, that may be present. In our experience, the skin diseases, almost without exception, are in a measure the evidence of autointoxication, even if they are infectious in origin (in this case the autointoxication playing a predisposing role); and it has been well established by now that all skin affections can at least be benefited by careful attention to the elimination and to the nutrition by the removal of autointoxication and prevention of its recurrence.

IS CHROMIUM SULPHATE A LAXATIVE?

In a recent number of CLINICAL MEDICINE, Dr. J. A. Burnett inquired if others had seen a laxative action from this drug. We received communications from quite a number of physicians who declared that the action was usually constipating rather than laxative. However, we have just heard from Dr. C. S. Scofield, Richford, Vermont, who tells us that the drug seemed to have a decidedly purgative action in a case of exophthalmic goiter, for which it was prescribed. In this case the purgative action was so severe that he was obliged to discontinue its use.

We are inclined to think that in the few cases where this remedy has a cathartic action this can be ascribed to the fact that it is sometimes a gastrointestinal irritant; but these cases are so few, if we can judge by our reports, that it hardly seems necessary to reckon with them.

CAPILLARY BRONCHITIS

We are informed by our good friend, Dr. G. A. Ross, of Ft. Wayne, Indiana, that

he recently had a very severe case of capillary bronchitis, which kept getting worse. Finally the doctor was called in, and when he first saw the infant it seemed to be *in extremis*. He ordered a cotton jacket applied to the chest, the body kept warm with hot flannels, and the windows to be opened, drafts being prevented by putting cheese-cloth over them. He then gave 1-250 grain of atropine hypodermatically, this dose to be repeated in half an hour if the child was alive. The next morning he was notified by telephone that the baby was not only alive but out of danger. As a respiratory stimulant, atropine is probably the best single remedy which we have, but emetine is usually indicated, and apomorphine frequently; while sanguinarine and ammonium carbonate (possibly an emetic also, if secretions are too free and threaten to smother the child).

GREEN SOAP IN THE TREATMENT OF PLEURAL EXUDATES

"We wish to call attention to the use of tincture of green soap, which has been employed in this institution for many years in cases of nonabsorption of pleural exudates, and which has proven valuable in many instances, not only when the exudate was serous or serofibrinous and of recent date, but also in all cases of fibroelastic exudates and pleural thickening.

"The green soap is applied by friction over the affected side after the skin has been washed with ordinary soap and hot water. As a rule the application is made at bedtime, is allowed to remain over night, and repeated daily or less frequently, depending upon the tolerance of the skin. When hyperemia occurs as an effect of irritation, this is allowed to subside before the application is repeated. In many cases the skin is tolerant enough to permit daily applications; in others marked hyperemia follows after its first use, in which event the soap must be diluted.

"We have noted equally good results in our own cases with those reported in the literature since its first introduction by Kappesser (*Berl. Klin. Woch.*, Vol. 15, 1878, p. 75) for chronically enlarged lymphglands, and its strong recommendation by Senator (*Berl. Klin. Woch.*, Vol. 19, 1882, p. 573), a few years later, for its good influence on the absorption of exudates. Our study of its use and effects leads us to believe that it is rather to the ready absorption of the contained alkali than the counterirritation that the therapeutic results are to be attributed."

The preceding is quoted from "A Clinical Study of 292 Cases of Pulmonary Tuberculosis Treated at the Winyah Sanatorium, Asheville, N. C., during the years of 1909 and 1910." By Karl von Ruck, M. D. and Silvio von Ruck, M. D., Pamphlet, Asheville, N. C., 1911.

TANNIC ACID IN PULMONARY CONSUMPTION

Dr. Albert Robin discusses the beneficial effect of preparations of tannin in consumptives (*Montreal Medical*, 1911, Dec. 15), and adduces clinical and experimental evidence of their value. Tannin diminishes the pathologic secretions of the consumptive lung, it affects the night sweats favorably, and reduces the diarrhea. The remedy also relieves the congestion around the tuberculous focus and, therefore, is of particular value in consumptives who are in danger of hemoptysis. There are very few contraindications to the use of tannin. Robin has found, though, that the remedy exerted no beneficial effect where the fever continued in spite of its administration. It is contraindicated in cases of fibrous phthisis with dyspnea.

We may add that we have frequently found tannin of value in cases of anorexia, or, for that matter, in all instances where a bitter tonic was indicated. As a result, we have arrived at the conclusion that tannin indirectly improves the nutrition by stimulating the appetite and the function of the digestive apparatus. In these days of new remedies it is well, sometimes, to remember the old-established means which were formerly used with good results—and tannin by no means has outlived its usefulness, although its astringency makes it unsuitable in most instances.

A Physiological and Clinical Study of Cocaine

ERYTHROXYLON coca, a shrub growing in the hot parts of America, contains a number of alkaloids, but one only is utilized therapeutically. This is cocaine (C_{17} H_{21} NO_4), which is found in the leaves of the plant in the proportion of 6 to 8 Grams per kilogram. It crystallizes in prisms of the clinorhombic type, and is colorless when pure. Its taste is bitter and its reaction strongly alkaline. Cocaine is slightly soluble in water at ordinary temperatures, and alcohol dissolves it in somewhat higher proportion. The salts which cocaine forms with acids crystallize with difficulty, except those with hydrochloric acid, and cocaine hydrochloride is very readily soluble in water, rendering it most suitable in therapeutics, so that it is employed to the exclusion of all other salts and even of the basic alkaloid, cocaine, itself.

Physiologic Action.—The properties attributed to coca, by the natives where it grows, from time immemorial, were far from indicating, primitively, the physiologic action of cocaine. While coca was regarded as an energy stimulant, which permitted one to perform painful and laborious work or make long marches in spite of insufficient food, or none at all, it was hardly noticed that after chewing coca leaves the tongue became numb and insensitive. With cocaine, on the contrary, the phenomena of insensitiveness dominate the scene of action, and the property of stimulation is relegated altogether to the background; while the existence of the latter property is not to be denied, it is at least justifiable to give it an altogether different interpretation from that which the ancient authors gave it.

It was believed that the stimulating property of coca was that which permitted those who ingested it to brave hunger, to make long marches, to perform laborious and painful works, without being incommoded, during a shorter or longer period, by deprivation of food. It was then believed that this result was due precisely to an anesthesia of the gastric mucosa, produced by the ingested coca leaves, an anesthesia which impressed the sensation of hunger and as a consequence the reflexes, also, of feebleness and fatigue, and so the economy was permitted to make use of its reserve powers without any apparent fatigue of the subject.

In reality, however, it is just on account of that very property of coca that it becomes an energetic agency of disassimilation and its use as a substitute for alimentation must be followed by a hyperalimentation and end in an organic deficit.

But be that reasoning about coca as it may, one thing is certain: that which dominates in it is the production of anesthesia, only it is badly interpreted. And the same is true of cocaine, for that which dominates in its action is its remarkable analgesic property, which procured for it an altogether unique place in medical practice, be it in medicine, surgery, or any specialty in which it cannot be displaced by any pretending succedaneum; and it remains in daily use everywhere.

Applied in an aqueous solution to a mucous membrane or on a denuded skin it produces a complete analgesic or ano-

dyne effect in from two to five minutes. If the skin is intact, cocaine should be used hypodermatically or intradermatically in order to obtain an anesthetic effect. This action does not last long and begins to grow less at about the end of half an hour and disappears totally in less than an hour. But in repeating the application the analgesic effect can be kept up indefinitely at will. Applied to the eye the anesthetic action of cocaine is of quite short duration and is accompanied by a mydriasis which lasts from eighteen to twenty-four hours.

The action of cocaine is usually limited to the territory to which it is applied; and this is of importance to bear in mind from an operating point of view, for we must see that no point of the field operated upon should escape contact with it, or else that point will retain all its full sensitiveness.

The analgesic effect of cocaine is always accompanied by a noticeable ischemia of the parts touched, which effect is the result of the capillary contraction under the influence of this medicament. When, therefore, cocaine is applied to a hyperemic or congested place we obtain, beside the analgesic effect, also an antiphlogistic, decongestive one, which seconds efficaciously the primary effect and in numerous cases not only helps to relieve but also to cure the patient.

Therapeutic Action.—The medicinal applications of cocaine, which alone are to occupy our attention at present, are innumerable, and in almost every instance where we meet with local pain cocaine can be useful. When we are concerned with a painful affection of the mouth, throat, larynx, esophagus or stomach, the indication for the use of cocaine is clear and precise and in many of these affections its analgesic property becomes to a certain degree curative also. In affections of the urethra, the bladder, the vagina or the anus, it is the same; so, too, it is in the numerous affections of the eyes, nose and ears, where the specialist resorts to its property of anesthesia, either for the sake of diagnosis or to facilitate an examination or some operative intervention, or to cure.

Among all those affections there is one group on which cocaine seems more and more to exhibit its sedative and curative properties. We mean the affections of the mouth—stomatitis, glossitis, gingivitis; and the affections of the throat—amygdalitis, esophagitis, laryngitis, etc.; and affections of the stomach—digestive troubles accompanied with pain, or neoplastic affections, such as cancer, etc.

We have said that cocaine, by virtue of its ischemic property, was a good antiphlogistic and efficacious decongestive at the same time, while being a remarkable sedative for pain. But that is not all. Experimenters who have made a study of cocaine recognize in it notable antiseptic virtues. Divers persons among them have affirmed that cocaine retards and even hinders the development of microbes, even the most virulent ones, for instance the bacillus of Loeffler and, *a fortiori*, the numerous other less virulent ones which are the habitual guests of the mouth and throat of even healthy persons. Cocaine therefore gives, in the affections of these organs, in addition to its pain-sedation, in addition to its ischemic property of decongestion, in congestive conditions also the not less valuable property of antisepsis.

In certain affections of the mouth and throat it is legitimate also to add, to the cocaine, chlorate of potassium or borate of sodium, each one of which is specially indicated.

Mode of Administration and Doses.—In surgery, cocaine is used either as a solution of 1 percent, or 2 percent at the highest, as a collyrium or spray, as for brushing over surfaces or for hypodermic injections. Without insisting upon the different modes of its use, we would call to mind that injections should always be made in the horizontal position in order to avoid very serious accidents that may happen at times. Internally employed the one- or two-percent solution of cocaine finds numerous indications.

The quantities of cocaine ordinarily given are generally far from reaching the maximum physiologic dose. Laborde, Magitot, and many others indicated that doses of 0.25 Gram (grains 3.75) and up to 0.30 Gram (grains 4.5) in twenty-four hours were not dangerous. Now it is quite rare in

ordinary practice for doses of 5, 10 or 15 centigrams (0.75, 1.5, 2.25 grains) *pro die* to be surpassed.—*Revue Therapeutique des Alcaloides*, February, 1911.

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[We have abbreviated this article somewhat, since in France cocaine seems to be used much more extensively than in America, in tablet form, in the treatment of various diseases of the nose, throat and stomach. In this country such use of the drug is discountenanced, on account of the danger of causing the cocaine habit. The remedy is one which should be employed with the utmost caution. Not only is the habit to be feared, but in its surgical use accidents are not uncommon. As a result, substitutes are being resorted to, some of which, at least, are safer than cocaine, while equally efficacious.—ED.]

TOBACCO SMOKING AND NICOTINE

Dr. Alfred Fröhlich addressed the Society for Neurotherapeutics, convened at Frankfurt a. Main, in October, 1911, on "The Toxic Effect of Tobacco Smoking and of Nicotine." He took the view that it was nicotine alone, as a poison, that is to be considered in the discussion of this subject. The effect of this poison consists at first in irritating, and later on in paralyzing the respiratory center, as well as the heart nerves, and this effect is similar to the one which it exerts on the vasomotors, both central and peripheral, i. e., vasoconstriction. The muscular system, too, and the glands as well, are irritated. These effects explain the spasms of the arterial blood-vessels which occur in chronic tobacco intoxications, in which, however, the experimentally produced changes of the vessels by nicotine had better not be drawn into the discussion. Fröhlich also calls attention to the changes of the retina and optic nerve, and to the frequent abortions among female workers in tobacco. In view of the high toxicity of nicotine he advocates the spread of the denicotizing efforts as regards smoking preparations.

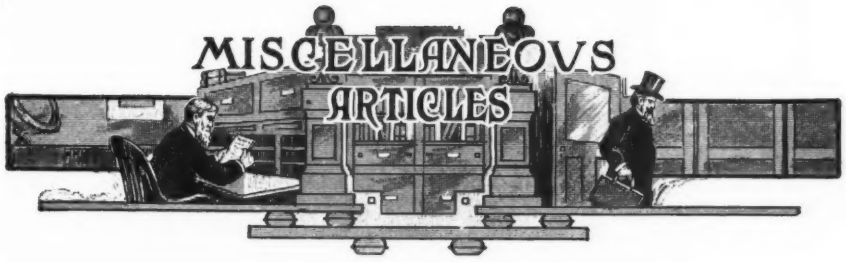
Prof. von Frankle-Hochwart referred to 700 cases in his own practice and spoke with eloquence and comprehensiveness on this occasion. He mentioned the general symptoms of tobacco toxicity, such as headache, dizziness, disturbances of sleep, anomalies of mental disposition, cramps (nicotine-epilepsy), and meningeal symptoms (nicotine meningitis, similar to meningitis serosa); and to these he added the more local affections (all of which however are distinguished by their transitory character), such as aphasia, paresis, intermittent stuttering (considered as spasms of cerebral arteria); furthermore, he spoke of disturbances of the cerebral nerves, as the optic, acoustic, and the vagus. He also discussed phenomena resembling neuritis.

Of still other conditions of which he spoke, the state of dysbasia angiosclerotica deserves special attention, the origin of which Erb discovered to be nicotine, and which is the frequent origin also of disturbances of virile potency. When it is considered, moreover, that the strongest smokers are found, nearly twice as many, among the luetics, who suffer, also, from neuroses more than normal persons, which fact makes nicotine excesses an efficient cause of neuroluetic diseases, then we can understand the strong appeal which the speaker made to restrain the nicotine abuse. To insist on abstinence from nicotine is not necessary; only those who are intolerant of it need deny themselves the use of tobacco.

The warm applause which was accorded these elucidations, and the debate on dysbasia angiosclerotica, which the professor opened himself, and which confirmed essentially all the facts adduced by the speaker, showed the favor and esteem in which this Vienna investigator is held by his colleagues. —*Wiener Mediz. Wochenschr.*, 1911.

THE TREATMENT OF HAY-FEVER

Rudolph Hoffman (*Muench. Med. Woch.*, 1910, No. 35) says that, since hay-fever is aggravated in cases with excessive thyroid function, the effect of which is vasodilatant and to lower the blood pressure, this condition is successfully treated with remedies that have a vasoconstricting action and that raise the blood pressure; for instance, hydrastis, ergotin, and through hyperemia by means of a bandage around the throat.



Prophylactic Measures Against Diphtheria and Scarlet-Fever

FROM time to time the question arises as to what measures the physician should adopt and advise for protecting other members of a household in which infectious diseases, notably diphtheria and scarlet-fever, have broken out; and the following lines are intended to answer such questions so far as this may be in the limited space available, yet sufficiently clearly to serve as a guide for all practical purposes.

Strangely enough, important and interesting as this problem certainly is, no special treatises on the subject seem to exist in literature. The opinions of physicians, so far as they have been expressed, are widely scattered through textbooks on infectious diseases and in periodicals. Hence the thoughts outlined here naturally are the views and reflect the experience of the writer; credit being given, whenever necessary, in the case of information obtained from literature.

On discovering a case of scarlet-fever or diphtheria, or, in fact, any acute infectious disease, the first duty of the physician is to his patient, the second to the patient's family, the third to his other patients, and then only comes duty to himself and to his own family.

First, then, as to the patient. The person afflicted should, as a matter of course, be isolated at once; if it be possible, in a large, airy room on the top floor of the house, and, again if possible, in a room that has the greatest possible exposure to the sun. Before receiving the patient, this room should be cleared of everything in the way of hangings, rugs, bric-a-brac, and all the thousand and one pretty but useless articles with which people like to decorate their homes, and especially their spare rooms. It should be furnished with a bed, a table, a chair, a dresser, and perhaps a cot for the attendant; all superfluous furniture being removed. The floor and walls should be washed (best with water containing some disinfectant), and the room be well aired.

Everything ready, the patient is taken into this room, put in the clean bed (the sheets being warmed), and, in the case of measles and scarlet-fever, the blinds are drawn because of his sensitiveness to light. And now the treatment is instituted in accordance with the principles accepted as proper. We do not here enter into this phase.

Only one member of the family or the nurse is to be permitted to attend the patient, and, like the latter, must be quarantined and entirely separated from the rest of the family until all danger of communicating the disease is past.

The sick-room, if an entire floor cannot be devoted to the patient and nurse, should be separated from the hall or communicating room by a bed-sheet hung outside the door and kept wet with some antiseptic solution, such as solution of corrosive sublimate, carbolic acid, formaldehyde, Platt's chlorides, and .so on. All other doors leading into the sick-room must be locked and the cracks sealed; if a sheet kept damp with an antiseptic solution is

hung over these doors also, so much the better.

Welch and Schamberg, in their textbook on acute infectious diseases (Philadelphia, 1905, p. 463), say that, wherever possible, facilities for ventilation should be considered in the selection of the sick-room, a room with an open fireplace being preferable. An excellent plan is, to secure the ingress of fresh air through an adjoining room, the windows of which may be kept open for varying periods, according to the season. This room should constitute the avenue of communication with other portions of the house. The spaces about doors communicating with other portions of the house should be sealed by pasting over them long strips of wrapping paper. Over the door communicating with the corridor should be suspended a sheet which is kept moistened with Labarraque's fluid, a 5-percent carbolic-acid solution, or a 1 : 1000 mercury-bichloride solution. Infectious particles floating in the atmosphere will adhere to the moistened sheet. The woodwork, furniture, and floors must be kept clean by mopping with cloths saturated with an antiseptic solution.

To the writer it appears that, if a separate room can not be given up to the patient and his attendant, maybe because the residence contains, say, only two rooms, the patient should be taken to the contagious ward of a hospital; or, if that is not feasible, it might be well to locate him in a tent sufficiently far from the building to insure proper isolation.

It goes without saying that immediately after the patient has been attended to, the other members of the family must be examined carefully for evidences of disease, and that they should be protected against any possible infection developing into disease, by increasing their resisting power, purging from the bowels any retained fecal matter, and administering calcium sulphide, in the form of 1-6-grain granules, for a period of several days.

As much as possible the remaining portion of the house must be kept thoroughly ventilated and all the other members of the family stay out of doors. It will be well to maintain the air of the house, especially the portions which are near to the sick-room, moist by the exposure in shallow dishes of antiseptic solutions; if possible, formaldehyde vapors may be developed, from time to time, in such a degree that they do not render the air irritating.

Now for the physician himself. Whenever the doctor knows that he is to visit a patient with an acute infectious disease, he should make that call after the rest of the day's work has been attended to, in order to lessen as much as possible the danger of communicating the infection to others. On entering the patient's house, it was the writer's custom, while in general practice, to don a gown which was made high in the neck, with close-fitting neck- and wrist-bands, and which reached to the floor. This gown he always carried with him in a special satchel, except when it was in use, when he had it aired, or washed by the family between his visits, as the case might be. As already said, this garment was put on before entering and taken off after leaving the house. In this way his clothing was protected, while the ventilation of his garments during the ride from this patient's house to the next one—if of any distance—would add to prevent carrying infectious pabulum.

It goes without saying that the entire family in which a case of scarlet-fever or diphtheria exists must be absolutely forbidden any contact with the outer world, in order to prevent further spread of the disease. In these days of universal telephone service, quarantine can be made almost perfect, because the orders to the grocery and butcher-shop can be given by telephone and can be filled by messengers who need not enter the house. Other children in the family, as already said, should be kept as much as possible out of doors, and the rest of the house must be efficiently ventilated.

For the protection of the physician's own family, it may be well for him to change his clothing on his return home and hang them up in a safe place, best out of doors, to air. To refer again to the writer's personal experience, he frequently, especially on arriving home at night, would remove his outer clothing on the

porch, having other garments handed out to him, and then he would hang up his clothing in the garden or in the barn to air.

Fortunately, in a case in country practice, where a physician drives many miles in an open vehicle and finds a case of scarlet-fever or diphtheria, his own clothing is almost certain to be sufficiently aired during the return trip. Whenever possible, of course, overcoat and coat should be left open during this trip so that the air can enter freely underneath.

On subsequent visits it will be well to examine, as a matter of routine, the other children, and, in fact, all the other members of the family, for any possible signs of the disease before seeing the patient, and to direct their prophylactic treatment, this consisting in the regulation of the bowels, proper feeding, calcium-sulphide saturation, mouth washing and throat swabbing or spraying.

It is well to insist, at each visit, upon absolute quarantine being maintained, and to forbid strictly the admission into the house of neighbors, friends, relatives or any outside persons who are obliged to leave the house again.

In this connection, it is well to remember, as a general proposition, that measles is most contagious during the prodromal stage, while scarlet-fever is more easily communicated at the beginning of and during the desquamative period. The diphtheritic virus, of course, can be communicated at any time, and the development of the disease depends, as in all infectious diseases, upon the want of resistance of the individual.

SOME FACTS ABOUT PILOCARPINE*

Pilocarpine is one of the two chief alkaloids found in pilocarpus microphyllus or pilocarpus jaborandi, Brazilian plants of the natural order of Rutaceae. Dose of the standard granule of pilocarpine, 1-64 to 1-6 grain.

Jaborine, the companion alkaloid of pilocarpine, while being isomeric with it, yet in its physiological action *completely antagonizes the action of pilocarpine*, which fact makes the uncertainty of action when the fluid extract is used a matter of no dispute, as it merely resolves itself around which of these two antagonistic alkaloids predominates. If pilocarpine is in the ascendency, then the sweating which follows the exhibition of this alkaloid will occur, and which may in the particular instance be the effect that is desired. If, however, jaborine is the ruling principle, then an action closely allied to that of atropine will result, that is, all secretions will be checked, and thus a result directly opposite to the one desired will be produced.

Physiological Action. — Physiologically, pilocarpine can be classed as a paralyzer of the vasomotor system, and a stimulator of the nerve-endings in the glands and involuntary muscle-tissue. This action, therefore, makes it a powerful diaphoretic and sialogog, a depressor of the cardiac muscle—by way of its stimulation of the ends of the vagus—a myotic, emetic, and under certain conditions an abortifacient. It produces profuse and rapid perspiration and salivation. The secretions of the nasal and bronchial membranes are increased, the action of the heart is primarily increased but later slowed, there is a fall in arterial tension, and the temperature is reduced from one to four degrees. The amount of urea eliminated is greatly increased, but the amount of urine is decreased, the watery constituent of the urine being eliminated through other channels. Children are affected less, proportionately, than adults, by pilocarpine. The avenue of elimination of pilocarpine is chiefly through the skin, it being rapidly diffused, and its effects generally pass off in from three to six hours. It is said to produce contractions of the bladder and spleen.

Therapeutics.—It is the indicated remedy in ptyalism. Pilocarpine should be studied in dropsical effusions of the lung, also in renal dropsy. In cardiac dropsy, when the heart is weak, pilocarpine is decidedly contraindicated.

*A New York physician recently asked us to give in THE CLINIC some detailed information concerning pilocarpine, how it acts, and the conditions in which it is most likely to be useful. We cannot better accede to this request than by the publication of this article, which is taken from Dr. Redfield's "Compend of the Active Principles." The price of this book is $1.00.

In eclampsia it is a remedy of sterling worth, producing quick and lasting diaphoresis and thus ridding the system of the toxins which have been the causative factors in the spasms.

It should be given consideration in cases of diabetes insipidus, where it reduces the amount of urine, and by throwing the work on the skin greatly relieves the kidneys.

In agalactia the exhibition of pilocarpine is productive of a profuse flow of milk.

In sthenic cases of erysipelas pilocarpine is the only remedy to be given any consideration, and its action in this class of cases is so sure and prompt as to make it a specific.

It should be studied in painful conditions of the muscles, especially when there is puffiness of the surrounding tissues; puffiness of the adjacent structures being the cardinal indication. It has been given with excellent results in cases of lumbago after macrotin had been exhibited without any appreciable result.

In combination with ergotin it is useful in diabetic conditions, to decrease the amount of water discharged.

In the early stages of bronchitis, in combination with bryonin or aconitine, it produces good results.

With asclepidin or veratrine it constitutes excellent treatment in pneumonia.

It exerts a special influence on the parotid gland and is therefore to be thought of in parotitis and ptyalism.

It should be remembered in alopecia, and by some writers it is claimed that its continued use will restore the natural color to gray hair.

Specific Indications.—Dryness of the tissues or perversion of the secretions, there being a deficiency in quantity. A condition of effusion into serous tissues or cavities.

Contraindications.—Increased or excessive activity of the glands, accompanied by a profuse and watery secretion.

BEDBUGS, MOSQUITOES, AND FLIES AS DISEASE-CARRIERS

Malaria has been known to the medical profession for a great many years; the fact is, there are few diseases with which the profession has been longer acquainted. The disease flourished in old Rome, the Pontine marshes about the city and the lower Danube River country being ideal places to breed the disease.

The old Italian and other European physicians many years ago pointed out the function the mosquitoes had in producing and spreading the disease, but in spite of this fact it was not until the year 1848 that an American physician, a Dr. Noth, began a study of this subject and brought the relation between the mosquitoes and malaria to the attention of physicians on this side of the water. Although such men as Pfeiffer and Koch also held the same views as did Noth, the profession at large was very slow to credit the discovery, and it was not generally accepted as a fact, even in the face of such eminent authorities, until Dr. Ross, in 1895-'98, experimented on a large scale and proved beyond question that mosquitoes feeding on the blood of those suffering from malaria were able to carry the parasites from infected victims and to inoculate healthy subjects; these, after the period of incubation, coming down with the disease.

The peasant-folk in the Old World had, many years before, observed that where a marsh produced mosquitoes in large numbers there malaria flourished; but there is no proof that these crude observers laid the cause of the disease to the right source, namely, the insects themselves. The savages on the eastern coast of Africa use the word *nebu* in speaking of mosquitoes and malaria, although they did not recognize the fact that the insect produced the disease.

In 1881 Dr. C. J. Finlay pointed out the fact that mosquitoes are also responsible for the transmission of yellow-fever. These insects, as we now know, were not only responsible for the prevalence of the disease on its native soil, but, by attaching themselves to vessels sailing to our southern ports, they carried the disease to our shores, where it spread death and terror wherever it gained a foothold.

We are all acquainted with these outbreaks of this disease in our own South,

where the disease claimed hundreds, yes thousands of victims, paralyzing trade and driving the timid from their homes, thus depreciating property and keeping many from settling in the sections visited by the disease. We are all aware how the people in the stricken districts prayed for the cold wave to strike the afflicted districts where it raged. We all knew the cold would stamp out the disease, but did not know why it did so, until we found that the mosquitoes were the cause of all the trouble.

With the cold snap of fall so anxiously waited for the mosquitoes, of course, vanished and ceased to be a menace to health and life. The mosquitoes operate only in warm weather and cold weather effectually puts a stop to their evil work. It was also observed that those living on high ground were not affected by malaria nearly as often as those whose homes were on low land. One reason for this is that the lower lands are warmer than those of higher elevation, and so, of course, in the lower-lying districts attract a much larger number of mosquitoes; besides, the insect seems to flourish best where it is low, warm, and moist.

The discovery of the relation of the mosquitoes to these diseases explained much that was shrouded in uncertainty before. It was observed even in cities that the night air was apt to breed malaria, although the people did not know just why this should be so. The reason for this, however, is, that the night is the time when mosquitoes are most active and at this time seek out their victims in search for food, which is always blood. The mosquitoe sucking the blood of a person having malaria receives into its own body many of the parasites, which it introduces into the next victim it attacks. And so this disease is spread, the mosquito having the power for an indefinite period of infecting healthy individuals. It has also been observed by shepherds that, if the insects first attack sheep, the herders seem to have the disease somewhat milder.

While the mosquitoes can spread malaria from person to person without limit, this is not true of yellow-fever, since a person thus infected once is not liable to a second attack. However, in the case of malaria, the first attack only renders a victim more liable to subsequent ones.

We are also aware at present that the common house-fly is responsible for typhoid fever, and I think it was Dr. Howard who christened it the typhoid-fly. This insect visits the most filthy places, and the more disgusting they are, the more it enjoys them. The fly visits decayed vegetables, cesspools, dead animals in all stages of decomposition, outhouses, manure heaps, in fact all places reeking with filth and infested with germs. Its feet become covered with germs and filth. It enters our homes, alights on the sugar and all exposed food, and, by rubbing the hind legs one against the other, deposits on it the adhering filth. And thus, by being swallowed, the pathogenic germs gain access into the body.

New England and the South are no longer the hotbeds of malaria they once were, since we have found out the cause of the disease. Neither is yellow-fever the awful scourge that it used to be. Draining marshes and destroying by this and other means their breeding places has so changed certain uninhabitable yet otherwise desirable localities that they are now almost free from the diseases in question. So now a correct idea of the nature of these diseases and of their true cause has not only made life here more secure but property more valuable. Medical science has been no small factor in human progress, as we see from these facts. The Panama Canal never could have been built by white men if we had not discovered the origin of malaria and yellow-fever, and acted on that knowledge; for this region—aside from the numerous other ones that might be named—has exacted an enormous toll in human life before these important discoveries were made.

However, I have spoken of these insects and their power to convey disease merely to pave the way to the study of another insect that also is a menace to man, inasmuch as it also conveys diseases from person to person just as surely as do the mosquitoes. I am the first physician to call attention to this insect, or bug, as a

carrier of disease. The insect which I refer to is the bedbug.

The bedbug is found in the crowded city, nor is the country free from it. I found them in large numbers in a farm-house while on a hunting trip. I have also met them in our great northern wilderness in log cabins and the forrest inns. The fact that a bedbug can live two years without nourishment makes it possible for him to remain in a deserted camp and greet the tenants on their next vacation. Once it gains a foothold, it multiplies rapidly and is hard to get rid of, as the smallest possible crack will not only conceal it from view but protect it from all efforts to destroy it. Only civilized man is troubled with this pest. A savage, no matter how filthy he in person or his surroundings may be, is never troubled with them. A crowded condition in houses seems to be essential for them to flourish at their best. Many apartment and tenement houses and even office buildings are infested by them, no matter how clean and particular the occupants may be. It is, indeed, almost impossible not to have them at some time in apartment houses where all classes of people are moving in and out all the time, carrying vermin from house to house.

The food of this insect, like that of the mosquito, always is blood, but it does not obtain the blood in quite the same manner as the mosquito. Its beak has four short hairs upon it, and these it inserts into the skin of its victim, and by working one against the other it draws the blood into its body much in the same manner that a chain-pump raises water. When at rest, the beak, which is curved, lies in a groove under the chest, or thorax. When it once starts out to draw blood it does not stop until it is so full that it can not hold another droplet, and if it is disturbed by its victim it will hunt up another person, if possible, and proceed to fill up on that one's blood. And it is here where lies the danger to man—the attacking by the creature of one person after the other.

The bedbug travels from bedroom to bedroom and from apartment to apartment, from diseased people to those who are well. Do you not now see that the conditions are ideal for the spreading of disease? For example, a bedbug attacks a diseased person, it goes next to one who is well; its beak is covered with diseased blood and germs from the former victim who is tainted, it then proceeds to insert its weapon and to mix the diseased blood it holds with that of the healthy person. If its beak is covered with the blood full of parasites, can it do otherwise than cause infection in the person previously healthy? It would be nothing short of a miracle if it did not. It works at night, when many sleep so soundly that it is easy for it to get its fill without, in most instances, waking its victim, and the sleeper is helpless to resist the onslaught. The innocent and guilty are alike his prey. Of course many housekeepers would deny they have the pest, but if you should investigate you would find many homes, you do not suspect, infested with these bugs. Even the most particular people may have these pests if they live in crowded quarters.

I have already pointed out several diseases that are caused and spread through the agency of insects of the mosquito family. If they can spread diseases, why cannot the bedbug? Its food is the same, namely, blood, and its method of obtaining it is essentially the same. I have studied this matter for several years and am sure I am correct in saying that many obscure diseases can be laid at this insect's door.

I am calling attention to the bedbug, not only to put the profession on its guard, but also so they will investigate this matter for themselves. I will now cite a few clinical cases that have come under my own observation. I have made a most careful study of them and feel certain the diseases mentioned were contracted in no other way than through the medium of the bedbug. I am sure the reader will admit the possibility of such contagion and the probability as well.

Case 1. A young girl from the South came north on a visit to a cousin, the latter being a patient of mine. The southern girl had malaria, with the attending chills and fever. After she had spent a time at her cousin's, two of the family came down with typical malaria. No member of

this family had ever had malaria before, nor did they live in a locality where it prevailed. They were intelligent people and were at a loss to see why they should have the disease. I investigated and found that the house was loaded with bedbugs. No one slept with the girl from the South, but the bugs could easily go from the infected girl to others of the family, as the rooms were all close together. I am as sure as I can be that the bedbugs in this instance were responsible for the spread of the disease to the others in the house, since all showed signs of having been bitten. Some people are very seriously poisoned by the bite of the insect, while others will not show signs of being bitten.

Case 2. A boy of seventeen contracted syphilis in the usual manner. He was at once cautioned about being careful of those about him. He carried out instructions carefully. He did not use the family bath-tub, but bathed at a downtown barber shop. He also had his own towel and wash-basin. Also, he refrained from kissing any of the family. In spite of these precautions, his mother and two of his sisters contracted the disease. One sister was eleven years of age, the other nineteen. He assured me he had been most particular and followed instructions to the letter. He was not only chagrined but almost frantic for having been the means—innocently enough, it is true—of infecting his own dear ones with this terrible disease. And right here let me state there was no question about the morals of these people, innocently infected, on the female side. The boy was led to visit a harlot while intoxicated, being made to think she was a chaste girl. It was a put-up job on him, as a practical joke, by some socalled friends of his. This lad was made drunk for this sole purpose, but his friends did not mean to have the joke go so far as to infect him, as they were not aware the girl was diseased in any such way.

I investigated the house where the people lived, as the source of contagion was in doubt, and found bedbugs in large numbers in every bed-room, the same being close together, and it was very easy for the bedbugs to travel from one to the other. I am positive that these innocent parties became infected by the bedbugs going from the diseased lad to them. They all had been bitten and showed evidence of it to a marked degree. There could have been no other way for them to contract the disease under the circumstances.

We all know that the blood from a person in the secondary stage of syphilis can convey the disease most readily to a healthy person, and this was the condition in this case, the disease being in this stage in the lad in question. I am certain I have seen erysipelas conveyed in the same manner. I am sure that this insect, the bedbug, is at the bottom of much more mischief than we have yet dreamed of. I am sure that a long, careful study of this insect will amply reward the keen observer.

The flea also must be investigated. I am quite sure the flea is to blame for more diseases than have yet been laid at its door. I have seen this insect attack man and make life a torture. The study of insects in relation to the spread of diseases has become of great importance, but the end is not yet.

GEORGE G. PHELPS.

Utica, N. Y.

[There is little doubt that we shall understand better how various diseases are transmitted when we have studied insects more. The common fly, the tsetse fly, the flea, the mosquito, the sheep-tick, and, latest, the bedbug have been convicted of high crimes and misdemeanors. However, Dr. Phelps is in error in thinking that he is the first physician to call attention to the bedbug as a possible carrier of disease. That honor probably belongs to Metchnikoff, who, some twenty-five years ago, suggested that the cimex lectularious might be such a carrier. Since then the idea has been brought up, from time to time, by many observers. In 1899 Coplin showed that pure cultures of typhoid fever could be isolated from this bug, and the probability of the transmission of tuberculosis, cancer, diphtheria, plague, and other ailments by this medium has been considered by a number of investigators.

We have not seen any discussion of the possibility of the transmission of malaria in this way, but it certainly seems quite feasible, and the idea receives support from the discovery, within the last few months, by Captain W. S. Patton of the Indian (British) Medical Service, that the organism of kala-azar, a disease which closely resembles malaria in some respects, goes through its cycle of development in the body of the insect in question.

While Packard states that the bedbug may survive for a year to a year and a half without food, this is probably very exceptional. Habgood's experiments show that it is very exceptional for it to live six months under such conditions, while two to three months may be taken as its usual term of life if deprived of nourishment.

Personally I should not consider the bedbug as a concomitant of civilization; rather, it belongs to the pioneer stage, thriving in newly cut pine lumber and buildings which are made of it. The lumberman's camp in the woods seems to be its ideal home.

The cases cited by Dr. Phelps are very interesting ones. We shall be glad to hear from others who have had similar experiences.—ED.]

IODOFORM FOR WOUNDS

For slight wounds, and more especially on exposed surfaces of hands and face, I have, for several years, after the wound has been cleaned (and, if required, stitches taken) used iodoform. I dust over with powdered iodoform, then apply over this liquid collodion. I repeat the collodion, as required, to make a solid coating. This will not have to be removed, until the wound is healed, except in rare cases. Try it!

W. A. BATES.

Purdon, Tex.

ATROPINE FOR MUSHROOM POISONING

Early in the evening of a September day I was called in a hurry to a man living near the woods, the messenger saying: "Mr. W. M. had been chopping some wood, and finding some toadstools, he gathered them for supper. Shortly after supper he took sick. The toadstools must have poisoned him." On arriving at the home of the patient, I found a man sitting in a chair, vomiting, deathly pale, a cold sweat pouring out of his skin, and complaining of cramps in his abdomen and legs. He called for a drink. As soon as the water was down he fainted, then vomited and purged. The woman said, "He was all right before supper."

The first things coming to my mind were atropine and charcoal. I ordered the woman to heat some milk in a tin cup and to put some more on the stove for boiling. I filled my hypodermic syringe with atropine solution and injected this into the patient's arm. Then I took from the wood-stove some coals out of the cold ashes and mashed them into a fine powder, put three knifepointfuls of this powder into a cup, covered it with hot milk, stirring it up well, and gave it to the patient. He retained it but a little while, then vomited. As soon as vomiting was over, I had another dose ready. After drinking that he said, "That makes me feel better in my bowels." He did not faint, but vomited again. So I gave him the third dose, doubling the amount of charcoal. After swallowing this the man said he was getting easier. He retained it for quite a while, but vomited it out. The next dose he retained. In fifteen minutes I gave him another dose, then waited thirty minutes for results. The color in his face was coming back and his skin was getting dry and warm. In half an hour I gave him another dose. After taking that he said the pain was almost gone. So, in half an hour, I gave him another dose, when, after a while, he declared he was feeling all right, and asked for something to eat. He ate some of his supper and retained it. I ordered him then to take a dose of charcoal every half hour till all pain was gone, and, after giving another hypodermic injection of atropine, I left.

Seeing this man afterwards, he said: "I won't meddle with toadstools any more. My family won't eat them, but I like them. I ate them before, but the last time I must have got some poisonous ones

among the lot. If ever I get into trouble with toadstools again, I won't forget charcoal. Every dose I took gave me more relief."

This is my experience with atropine and vegetable charcoal in mushroom poisoning. I have looked for the source of my information through my medical library, but failed to find it. No doubt in your extensive library you may find mention of it.

G. E. HANZIG.

Ellendale, Okla.

SOME PNEUMONIA EXPERIENCE

Some days ago, while in conversation with Dr. F. B. Kirby, I mentioned the fact that during the past winter I had had a rather remarkable series of experiences with pneumonia—remarkable, not only in the unusual number of cases treated, but also in the almost universal recovery of these patients under a simple line of treatment. I do not submit these cases because I have anything new to offer in the care or treatment of pneumonia, but rather to emphasize the efficiency of the remedies which we now have at hand to cope with the dread malady. About three-fourths of my cases occurred in children under three years of age, and the remainder in advanced middle life or old age, there being practically no cases between the ages of three and fifty.

Let me first cite the only cases which were lost:

The first, an old lady, aged 86, quite fleshy, had been ill two weeks with a severe cold but was feeling some better, when a serious chill occurred, whereupon her temperature mounted at once to 104.5° F. An overwhelming toxemia, which nothing seemed to lessen, carried her off on the fifth day, although the amount of lung consolidation was slight and she seemed to have sufficient breathing space.

The other fatality occurred in a child of thirteen months. The case was not brought to my notice until the fifth day of the disease. At that time the patient was in a moribund condition, and of course the case was considered hopeless from the first. Death was the anticipated outcome.

Those two were the only deaths occurring under my care in nearly one hundred cases. I used no routine treatment, but accepted each case on its own merits, and tried to treat each one individually.

Briefly, the remedies I used most were: the defervescent compound (aconitine, veratrine and digitalin), emetine, calx iodata, and the triple sulphocarbolates. For the infantile cases I dissolved one granule of the defervescent compound for each year of age, plus one, in twenty-four teaspoonfuls of water and added 1-20 grain calomel to each dose. I gave one teaspoonful of this every one-half to two hours according to temperature, and continued giving the remedy as long as the fever lasted. Full doses of emetine and calx iodata were given every three hours until the lungs were entirely clear. During convalescence I usually gave small doses of strychnine dissolved in elixir lactated pepsin suitably diluted. The bowels, of course, were kept freely open throughout the entire illness.

Various external applications to the chest were employed, though in some cases I used no external treatment at all. The kaolin kataplasm (U. S. P.), cotton jackets, camphorated oil, and onion poultices were all tried, but I feel that they all seemed to ease the minds of the relatives and nurses more than they relieved the feelings of the patients themselves. I do not mean to condemn these time-honored expedients, but, personally, I do not place confidence in them nor hold them in the same esteem as some of my fellow practitioners and the laity in general do.

All adult patients received an initial calomel and saline purge, and when the intestines were as empty as possible, they were given 5 grains of the compound sulphocarbolates every three to four hours until convalescence was well established. I regard this point as one of great importance, as these drugs so markedly prevent toxic absorption from the bowels, and it is the toxic absorption which kills by far more patients than consolidation of air-space in the lung.

One defervescent granule was given every one to three hours while the pulse was full and hard, this being changed to

the dosimetric trinity when the pulse softened, or I used from the first if the pulse was feeble. Strychnine, cactin, and digitalin, and other supportive remedies were given as indicated. When expectoration was difficult full doses of calx iodata and emetine were given until the desired result was obtained.

I have always felt, and I do now, more than ever, that pneumonia is a disease for us to *treat*, not one to be let run its natural course. With the weapons now at our disposal, we should place this malady on the low mortality list. GEORGE S. SPENCE.

Leesburg, N. J.

ABORTING PNEUMONIA IN THE DOG

I am writing you with rather a feeling of diffidence, since I belong to another branch of medicine, i. e., veterinary medicine, but I take CLINICAL MEDICINE and am deeply interested in all things pathological and therapeutical.

I am much interested in the discussion, "Can Pneumonia be Aborted?", and leaving aside the direct answer to this question, I should like to know the why and wherefor of the results obtained.

Among medical men it is generally admitted that pneumonia is caused by the pneumococcus, which is often helped by pyogenic bacteria as secondary invaders. Now how do the equalization of the circulation and the "cleaning up and keeping clean" of the primæ viæ prevent the further activities of the invaders? Is it that the regulation of the circulation and the controlling of the symptoms give the defensive powers of the body time to get the upper hand, or what? The medicinal agents, aconitine, veratrine, strychnine and digitalin, have no germicidal action themselves, so what is it that kills the "bugs" or renders them harmless? I hope that you will not consider me trespassing on forbidden ground (I am quite convinced that I have time and again aborted pneumonia in animals) in asking for this information, but, if I have offended in doing so, I sincerely apologize and shall not repeat the offense.

C. G. SAUNDERS, V. S., B. V. S.

Toronto, Can.

[Not until after we had answered Dr. Saunders' letter did we learn that he is professor of canine diseases in the Ontario Veterinary College, which makes his inquiry all the more interesting and flattering. Our reply was, essentially, as follows:

"An acute disease, in the last analysis, is an evidence of disturbance of equilibrium. Normally the defensive forces of the body are sufficient to resist bacterial invasion. For instance, during the winter months the pneumococci are almost constantly present in the mouths and throats of many people—yet they escape pneumonia generally, for one or both of these reasons: First, the germs may not be of a sufficiently virulent type to overcome the resistance of the individual who carries them; second, the individual's resistance may be unusually high, so that even the virulent germs are harmless to him. The whole thing rests upon balance—equilibrium. When the strength of the body is a little greater than the disease-producing power of the germ, disease can not be established, or, if already under way, cannot progress. Therefore, the most important thing to do to prevent disease, or to arrest it, is to raise the resisting power of the body—assuming that we cannot destroy the germ itself.

"Now, what can we do to raise resistance in beginning pneumonia? Without considering all the factors, etiologic and pathologic, we know that one of the most striking of the phenomena of the disease is the disturbance of circulatory equilibrium, as a result of which a part of the body is weakened because its supply of blood is too large. In beginning pneumonia, the skin is oligemic and the lung hyperemic; there is blood stasis in the lung, and germ multiplication is thus favored. If we can restore normal circulatory conditions we have contributed one very important factor to the restoration of the body equilibrium—and restoration means a return to health conditions. If we can supply this factor promptly, very often the body resistance is still high enough to arrest the attack before it has gone so far that the classical course of the disease is inevitable.

"It has been found that in this reestablishment of equilibrium the combinations

of aconitine, veratrine, strychnine and digitalin do the work better than perhaps any other remedies that are to be found. Besides affecting the circulatory organs, and aiding in the reduction of temperature, the veratrine acts also as a powerful eliminant and the strychnine raises the nervous resistance.

"In treating the disease, when developed, other factors must be considered. The pneumonia patient is suffering from a septicemia, which endangers life mainly because it weakens the heart through toxemia. The congestion of the lung puts enormous additional work on the heart and great cardiac weakness therefore means death. Besides reducing the toxemia, we should seek to relieve the work of the heart—best done by decongesting the lung, and *this is best accomplished with our defervescents.*

"Of course there are still other factors. We may and should use remedies which directly influence the infectious agency, like echinacea and calcium sulphide, or contribute directly to its destruction, like the vaccines. And we should endeavor to remove the contributing poisons generated in the bowel (or elsewhere), by appropriate remedies—laxatives and intestinal antiseptics. All these measures help to restore the equilibrium."

In reply to this letter we received the following from Dr. Saunders:

"Your clear setting forth of the case has quite removed my difficulty, and your willingness to admit a veterinarian into your discussion has gratified me exceedingly. Curiously enough, only the day after writing you I had a case of acute congestion of the lungs in a dog, which I have no doubt whatever would have developed into a marked case of lobar pneumonia (a rare condition in the dog), had I not energetically attacked it with the defervescent compound. The initial temperature was 107° F., there was a full, bounding pulse, and the usual lung symptoms. Treatment: 2 grains of calomel and one tablet of the defervescent compound every thirty minutes for six doses, then one every two hours, as that seemed to maintain the effect nicely. In ten hours the symptoms had subsided, temperature was normal, and the animal normal except for a little weakness, from which it rapidly recovered. No other treatment was given whatever. Good enough for me!

"I have another case on hand at persent, but was not called until the second stage. Temperature, 106° F., great dyspnea, anorexia complete, obstinate constipation, painful cough, etc. Treatment: Calomel, 2 grains, and one tablet of dosimetric trinity every hour; one dram glyco-heroin three times a day, and 20 grains of potassium nitrate (to eliminate the chlorides) thrice daily. Diet: beef tea with a dram of whisky every two hours. Today the dog's temperature is 103° F., general condition much improved, with signs of resolution.

"Is my treatment rational and up to date? Or am I only getting results by luck?"

The Doctor's treatment is certainly rational, and the results he is getting are very far removed from "luck." He has been doing splendid work with the active-principle remedies, some of which work is recorded in *The American Journal of Veterinary Medicine*, the editor of which, Dr. Campbell, calls my attention to Dr. Saunders' success in treating heaves in horses, a disease in which nearly every country doctor is interested. While this is distinctly "another story," we are going to tell you how he cured such a case, a bad one—in a pony twenty-nine years old. He proceeded as follows:

"Treatment: Diet of oats and grass, and lime water to drink. Strychnine sulphate, digitalin, hyoscyamine, of each one-third grain, three times daily. Fowler's solution, one-half ounce twice daily. Improvement was well marked right from the start. The treatment was persisted in for six weeks. An occasional handful of sodium sulphate was given in the feed to keep the bowels well regulated. By fall the animal was back again into fine condition, well rounded out, glossy coat, and, despite his age, full of vim and ginger.

"He has been driven regularly ever since, the excessive heat of last summer not affecting him. I saw him only last week

and he was in first rate shape, with no sign of heaves. I know this sounds rather like a fairy story, but it is the unvarnished history of *the worst case of heaves I ever saw or expect to see.*"

This is how the alkaloids make good in animal practice.—ED.]

DR. AYLESWORTH'S TREATMENT OF PNEUMONIA

In the December number of CLINICAL MEDICINE I was interested in Dr. W. H. Aylesworth's paper on the treatment of pneumonia. His method is similar to my own, but the percentage of mortality was different. However, the information which I specifically desire is as follows:

Does he change no shirt?

Does he use no hydrotherapy?

Does he use only *three* doses, half-hourly, of strychnine, atropine, digitalin, and glonoin?

T. W. KING.

Maloy, Ia.

[We referred Dr. King's letter to Dr. Aylesworth, who replied as follows:

"I may not have been quite explicit in stating just how much of each remedy should be given, or how often the doses should be administered; however, the *kind* and *quality* of the stimulant medication was mentioned, leaving it entirely to the attending physician so to regulate dosage and frequency of administration as to attain physiologic effect and then maintain that effect in the case in hand. I am accustomed to use the combination of remedies referred to (strychnine, atropine, digitalin, and glonoin) every half-hour until full effect. Sometimes it may be necessary to give it every fifteen minutes for six or eight doses. The susceptibility of the patient must be looked into by the physician himself.

"Early in my article I made the statement that I did not allow a remedy or a shirt changed—meaning that others were not permitted to make such changes, who lack the necessary judgment. *I* make such changes myself whenever I believe them necessary or desirable.

"I use no hydrotherapy, except such as may be necessary to keep the body clean, externally and internally.

"Any physician who wishes to know just how I proceed in these cases will get a full and frank reply if he will write me, enclosing a 2-cent stamp.—W. H. AYLESWORTH, Peoria, Illinois."

We shall, all of us, be glad to have Dr. King describe his own methods and report results. If they are good we want to know; if not good, he should know.—ED.]

CAMPHOR IN PNEUMONIA

I have just read, in the January number of CLINICAL MEDICINE, page 75, the "Camphor in Pneumonia" article. I am sorry to find that the method of administering the camphor has been incorrectly reported. Just having completed the management of a septic pneumonia with many complications, by the treatment referred to, and being a friend of Dr. Seibert's, I feel induced to correct the report.

The method is to make a 20-percent solution in oil, and inject 12 Cc. (no less) every twelve hours, and no oftener.

I hope you will take this correction in the spirit in which I send it.

B. M. FELDMAN.

New York City.

[We appreciate the doctor's kindness in putting us right.—ED.]

CALOMEL IN PNEUMONIA AND ELSEWHERE

Some time ago I read an excellent article in CLINICAL MEDICINE on "Pneumonia," by Dr. W. W. Cox, from which I quote the following: "Then why wait six or eight hours for the cathartic to act before directing attention to the congested lung? The cathartic may wait a few hours, and in many instances might not need special attention; but I maintain that it is dangerous and not giving the patient the best chance for his life, not at once to direct attention to the congested organ."

Apropos of this declaration, I should like to ask if any of the "family" have

"met up" with any drug that will start all the secretions of a person's "innards" like a full dose of calomel? In order to emphasize this, I ask permission to relate the following incident:

Shortly after the Civil War, Judge Henry was lying at death's door in St. Joseph, Missouri, with a double pneumonia. His family sent for his brother, Dr. Henry, of Independence, Missouri, and the latter took the celebrated Dr. Wood, of Kansas City, with him. They examined the sick man and went out to consult and agreed that there was very small chance for recovery.

Dr. Henry asked Dr. Wood what they had better give him.

Dr. Wood said: "Twenty grains of calomel."

"Dr. Henry said: "Isn't that too much of a dose?" Whereupon Dr. Wood replied: "My God! make it forty."

The result was that they compromised upon 20 grains, and all the lagging secretory organs of the sick man's body were whipped into action, he was well cleaned out, and recovered.

Heroic dose? Yes. But it was a desperate condition and required a desperate remedy, and all other remedies combined would not have stimulated those clogged organs like that heroic dose of calomel.

I saw a young man, in consultation, who had been sick nearly a week with a double pneumonia and not a particle of calomel had been given.

The heroic doses of calomel that were given by our professional "daddies" caused a prejudice against calomel, first by the laity, and this caused doctors to "toady" to public sentiment in order to gain the confidence of the people.

I wonder if there is a physician on earth who has never heard something like this: "Now, Doctor, I don't want you to give me any calomel," or, "Doctor, I can't take morphine."

The profession has tried to get away from this valuable drug, but the common-sense men, who demand results, have found that it is often the sheet-anchor of medicine. While it is very seldom needed in 20-grain doses, yet, the other extreme is also bad. Why is it necessary to give 1-6-grain at a dose for six doses, thereby keeping the patient nauseated with that nasty calomel feeling right down in the pit of the stomach? Just as if the calomel alone is not enough, some of the brethren put in a little podophyllin with it so that the patient will feel sick enough to think that he is getting the worth of his money.

Perhaps the majority of doctors are so strong that they never have to take any of their own "dope," but I have taken mine and "I know whereof I speak," and I know that 2 grains of calomel with soda, taken at bedtime, will gently clean out the system as nothing else will, and I know that from 2 to 5 grains given at one dose to a very sick person will "clean out and clean up" in short order, and that with the minimum of nausea.

I know that I am treading upon the toes of the alkaloidal brethren, but criticism from our friends never hurts and we should strive for the middle way in therapeutics rather than for either extreme.

Mr. Moody went to Oxford University for the purpose of learning how to preach, but returned home disappointed, and shortly afterward he gained the coveted information by hearing a man of little reputation preach a sermon upon "The Boundless Love of God."

Thus it may be possible for the "big guns" of our profession to glean an occasional truth from the "small fry" out on the firing line.

I heard Dr. Wyeth relate how he got a pointer from a backwoods doctor who had the resourceful ability so common to our combative Americans. Said doctor removed a fish-bone from the esophagus of a boy by causing him to swallow plugs of wet cotton mixed with cornmeal, and then removed the "fish bait" by giving the boy an emetic. Lo! the fish-bone was stuck in the cotton all right.

Long live THE AMERICAN JOURNAL OF CLINICAL MEDICINE and its able editor.

T. F. P.

——, Washington.

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[We like the doctor's criticism. It is frank, clean-cut and the spirit is right.

Calomel is one of our indispensable remedies—though I know that some of the readers of CLINICAL MEDICINE will demur at that statement. Every year I note a return to this great drug of the fathers—even among eclectics and homeopaths.

Just the same, I cannot agree with the doctor as to the necessity or desirability of resorting to the massive doses of "the good old times." Once in a while it may be a good thing to give the drug in generous quantity, when it is desirable to get a good action, and get it quickly, but usually the small repeated dose will do the work effectually and do it more pleasantly than the large one. That, at least, is my experience. When calomel is administered in granules or tablets, in 1-10- to 1-6-grain doses, the drug is usually first triturated (if said granules and tablets are made *right*—always) anywhere from six to twelve hours, by mechanical methods, which are many times as effective as the mortar and pestle in the druggist's hands. Every molecule, almost, is separated from its fellow and in a state where it is capable of being put into contact with the bowel-wall and subject to the action of the bowel secretions. I am confident that thus administered it is manyfold more potent than when given in mass as poured from the shelf-bottle. I have repeatedly seen one or two 1-10-grain aromatized calomel tablets produce a full and pleasant action of the bowels of a child—do better work than a grain or two grains used in the old-fashioned way.

As to the disturbance of the stomach produced by the small doses, I must say that the doctor's experience is different from my own. On the contrary, when I have a case of troublesome nausea, I frequently give several of these minute doses of calomel to "settle the stomach." Works, too! The podophyllin is sometimes added when it is desired really to "stir up the liver." Calomel, in spite of its repute, is not a true cholagog. Podophyllin has a decided hepatic action, which is most desirable in many cases. It may cause some griping, but this is usually not severe enough to elicit serious complaint—and not half as bad as that produced by some of the old stand-bys.

I'll join the Doctor in his fight for calomel. After all, we disagree only as to a detail. He likes calomel action and gets it. So do I.—ED.]

TREATMENT OF PULMONARY CONSUMPTION BY BROMINE INHALATION

Dr. Chas. E. Davis, of Eureka Springs, Ark., recently published a pamphlet containing a series of articles on the above subject which had appeared in THE AMERICAN JOURNAL OF CLINICAL MEDICINE and in *The Wisconsin Medical Recorder*. In these papers he describes his method of treating pulmonary tuberculosis by inhalations of bromine prepared according to the following formula:

Alcohol (deodorized).....ozs. 3
Bromine .....dr. 1-2
Chloroform (Squibb's) ....drs. 3
Ether .....drs. 3
Hydrocyanic acid, dilute...gtt. 30

Label: Keep tightly corked in a glass-stoppered vial, to avoid rapid deterioration. Use as an inhalant three or more times a day as directed.

It goes without saying that these inhalations are supplemented by such general and medicinal treatment as the individual may require. The results described by the author are extremely favorable and tempt one to adopt the treatment. He insists upon the importance of regulating the strength of the inhalant from day to day, to suit the chest conditions of the patient, by adding a few drops of bromine as it weakens from use, and keeping it just strong enough to "cut the phlegm," disinfect and raise the "sinkers," but not strong enough to cause irritation or strangling. This, with free and full outdoor breathing and perfect regulation and stimulation of all the vital functions, will give the best possible results in all cases.

We are informed that the originator of this treatment probably was Dr. Nathan W. Abbott, who used it over fifty years ago in Dixon, Lee County, Illinois, and who came to Chicago to specialize in the treatment of pulmonary tuberculosis with this method, remaining there until his demise, some time in the late seventies.

However that may be, the matter is worthy of investigation. Dr. Davis will be glad to send his pamphlet to any one requesting it, enclosing a 2-cent stamp for the necessary postage.

THE PUPILLARY REFLEX IN H-M-C ANESTHESIA

Relative to the H-M-C and the pupillary reflex: I have many times called attention to the fact that the state of the pupil *can not* be depended upon after H-M-C has been given. But—the man who depends upon the pupil with the conjunctival reflex as a guide to the amount of anesthetic to give is a dangerous man: respiration first and pulse second should be the guide.

There is this peculiar thing about H-M-C, however: the pupil *does* dilate just before death from too much chloroform (I don't know about ether), so that the occurrence of a dilated pupil is a better sign of danger than when H-M-C is not given, since there is a deceptive dilatation in the early part both of chloroform and ether narcosis.

EMORY LANPHEAR.

St. Louis, Mo.

[This is an answer to question 6 on page 433, April CLINICAL MEDICINE. We asked Dr. Lanphear to give us his opinion, but his reply reached us too late for April. Though belated, it is appreciated just as much now as ever.—ED.]

THE ETIOLOGY AND TREATMENT OF SIMPLE GOITER

Dr. Robert McCarrison, captain in the Indian Medical Service, has an important communication in *The Lancet* for February 10, on the vaccine treatment of simple goiter, which well repays careful study.

In former papers he showed that the infecting agent of endemic goiter exists in the intestinal tract and that, in fact, goiter is due to the presence of a living disease organism in the intestines. He also showed that the thyroid gland is markedly influenced by the nature of the bacterial flora of the intestines and that one of its chief functions is to protect the body from the many toxic substances which find their way into the blood stream from the alimentary tract.

This view is supported by some experiments in which the thyroid glands of goats were found to undergo marked change as a result of the continued contamination of their food with cultures of microorganisms grown from the feces of goitrous individuals.

These findings throw an interesting light upon the importance of the antitoxic action of the thyroid mechanism, and we readily realize that the gland undergoes hypertrophy as a result of a definite stimulus which is commonly toxic material absorbed from the alimentary tract. Consequently the enlargement of the gland in goiter is not an evidence of a deranged function of the organ but of its effort to resist some toxic agency. By reason of a functional imperfection of the thyroid gland the poisonous substances absorbed from the alimentary canal are allowed free play on the unprotected tissues of the body, and such conditions as tetany, cretinism and myxedema are the result in extreme cases.

The close connection of thyroid enlargement with the intestinal flora has an important bearing on Metchnikoff's discovery that certain microbes of our normal intestinal flora become harmful by reason of poisonous substances which they produce in the intestines. These organisms are of the coli group, certain spore-bearing organisms and a staphylococcus. By their action on proteid foodstuffs they produce poisons—indols and phenols—which are absorbed through the intestinal wall and give rise to fibrotic changes in the liver, kidneys and arteries.

As said above, when the thyroid is called upon to combat the several poisons found in the intestine, and to this task is added the disposition of the specific virus of goiter, an extra strain is thrown upon the gland, which undergoes hypertrophy unless it proves capable of combating both the intestinal poison and the abnormal goiter virus.

This assistance appears to have been rendered in the author's cases, in which

he vaccinated his patients with from 150 to 350 millions of combined bacteria, namely, a coliform bacillus, a spore-bearing bacillus and a staphylococcus, all of which he had isolated and cultured from the feces of his goitrous patients. He found that in the simple parenchymatous variety of enlarged thyroid from four to seven inoculations were sufficient to reduce the size of the enlarged glands to normal.

In some of his cases the author employed autogenous vaccines, but he obtained equally good results from stock vaccines or from vaccines produced from cultures derived from other patients. He also obtained satisfactory results from vaccinating several patients with bacteria cultured from the feces of a goitrous Australian pony.

Dr. McCarrison's communication is of great interest, not only in assisting in the elucidation of the etiology of goiter, but also in opening up a biologic mode of treating this vexing condition that so often resists all modes of treatment that we have been in the habit of employing. It is to be hoped that he will continue his researches and that they will be taken up by other investigators.

CACTIN IN "CAR-SICKNESS" AND MORPHINE-HABIT

Not long ago a patron called to know whether I could give his wife anything to prevent "car-sickness," saying that she and her three children were about to start on a thirty-mile journey by rail. I gave him some cactin granules, 1-64 grain each, and directed that three be taken fifteen minutes before boarding the train. The man afterward reported as follows: "My wife did not get sick from the trip, but the three children who had not been given the medicine were all vomiting when they reached their destination."

This would seem to indicate, not only that cactin was effective in preventing "sea-sickness" or "car-sickness," but that a susceptibility to car-sickness might be an inherited peculiarity.

A morphine habitué was visiting my home one night, and I was presenting to him the merits of the dosimetric system, commending the neatness, convenience, and effectiveness of the granules. He seemed drowsy, almost asleep in his chair, and apparently took very little note of the discussion.

I gave him, for inspection, a bottle containing about two hundred cactin granules. In order to convince him of the truth of my statements, I urged him to chew one or two, assuring him there was neither harm nor taste to them. This he did, but he also slipped the bottle with its contents into his pocket (unconsciously, of course, or apparently so). This practice of unconsciously slipping things into their pockets may be peculiar to morphine habitués, or it may be peculiar to Texans. Pretty soon the man "came alive." His eyes began to brighten, and he grew talkative, yea, garrulous, and I yielded him the floor. And I began to regret that I had aroused him from his slumbers, for I had need to take a dose myself—had I then known or suspected the cause of this garrulousness. I did not then know he was a habitué, but he told me the next day that he was without his drug and that the granules "braced him up," and seemed to have as good effect as the morphine, and by taking one or two every three hours, or when he felt sluggish, he was enabled to go ahead and do his work.

I have never had an opportunity to verify these experiences, and I give them only for what they are worth. This morphine habitué continued about one week or longer, saying that he was without morphine and that the cactin answered all the purposes.

W. W. Cox.

Harrold, Tex.

HYGIENIC DRESS

The matter of where to put the weight of the clothing has not received the consideration it deserves. We have the habit of regarding the shoulders as the most suitable part of the body to bear the weight, but probably have not considered the effect upon them. Shirts and coats, of course, must be upheld by the shoulders; what I refer to more especially is the placing of

suspenders over the shoulders, thereby concentrating the weight of the lower garments on comparatively narrow areas.

Nearly all boys have strong, shapely shoulders, with splendid muscular development, and the shoulders thus seem to be eminently adapted for the uses indicated. But are not the movements of the shoulders thereby restricted and the shoulders themselves depressed by the constant traction, so that after some years they have lost their strength and shape and droop forward, bending the back correspondingly?

While the shoulders are well adapted for garments for the upper part of the body, the lower half has its own rigid point of support, one which is thoroughly adapted for the purpose and which should not be passed over for the less well suited shoulders. The place for the lower garments to be supported is the hips. The question, then, narrows down to a choice between suspenders and belt, and I believe the belt is the better of the two, by all odds.

But there are objections to the use of the belt. When made tight enough to hold the trousers close to the body and to prevent their slipping down from the hips, it compresses the abdomen greatly, which is detrimental to the maintenance of good health. This undesirable condition, however, is not an inherent characteristic of the belt, but is due to the characteristics of the material of which the belt is made and which can be avoided by proper selection.

The right belt is the one which will support the clothes without constricting the waist. Can this be accomplished? Yes. A belt made of leather as stiff as sole leather will support the trousers without requiring its being tightened sufficiently to constrict the abdomen and yet not slip over the hips, but will place all the weight on the hips themselves.

This is the preferable form of belt, though such belts are not in fashion at this time and are not on sale. Of course they can be made by harness-makers and other leather-goods manufacturers.

The underclothing conforms to the same rules. Usually drawers for men are made with loops through which to put suspenders and thus add their weight to that of the trousers upon the shoulders. To overcome this condition, union suits, composed of one garment from shoulders to ankles, should be worn, as it is not feasible to wear several belts.

This arrangement apparently is not getting away from the proposition of taking the weight of the clothing off the shoulders. But the weight of the drawers is very light compared with that of the trousers, which are made of much heavier material and are also weighted down with other things placed in the pockets. Secondly, the upper part of the union suit is broad and is spread entirely over the shoulders, whereas suspenders are extremely narrow and confine the weight to inordinately limited areas. Thirdly, the clinging nature of the underwear places some of the weight locally, thus relieving the shoulders. Fourthly, if a belt be worn for the trousers, it presses upon the union suit at the hips, and suspends them from that point.

Women's underwear is susceptible to the same criticism, Some underwear is made with a drawstring, which gathers the garment in an unsightly, bulging mass at the waist-line, the place where the woman wants most to look narrow. What with the drawers and several petticoats bunched on top of one another, it is a wonder that some women have any discernible waist left! The union suit of underwear for women is virtually a necessity; certainly it is highly desirable, for all the constricting bands at the waist, from the corset out—drawers, petticoats, underskirt, overskirt, and outside belt—put a tax on waist endurance and a strength that is enough to render invalid the wearer.

Backs will be stronger when women cease wearing corsets and use cotton waists or brassières instead. The almost rigid corset is a weakening element in clothing for women. The athletic girl will probably relegate the corset to oblivion some day.

The tendency toward well-fitting outside garments, especially one-piece dresses, for women is a great improvement. The old style of huge, spreading skirts, much draped, with pleat upon pleat at the waist, adding weight to the much gathered undergarments, is certainly overloading the waist

with weight and superfluous clothing. The socalled hobble skirt, if not made too narrow, is a sensible improvement upon the old-style wide-spreading skirt. A physician of Philadelphia a few months ago commended the harem skirt as a very sensible garment for women. The bloomer style is certainly superior to loose, open-bottom skirts and may some day be the raging fashion.

JOHN C. ROMMEL.

Philadelphia, Pa.

LOVE'S CHARM*

By E. S. Goodhue, M. D.

The older I grow,
The better I feel.
This world, I'll concede,
Is a great place, indeed;
  And a deal
Of the talk that we hear,
About things being drear,
Is, to say the least, queer.

I am fifty or so,
And can honestly say
That the skies are as blue,
And my friends all as true,
  As the day
I turned twenty-one,
With my face to the sun—
Quite ready for fun!

And the one who took stock
In my shaky concern
Says, she doesn't regret
Her transaction as yet;
  For 'twill earn,
In any event,
In love and content,
Just one hundred percent.

Our first dividend
Was quite a surprise,
'T was declared, in our sight,
At the hour of midnight.
And our eyes
Revealed how much joy,
Without shade of alloy,
We spent on the boy!

And the next came in time—
Two percent, if you please—
A wee, tiny girl,
As pink as a pearl
Just fresh from the seas.
She has raised the pro rata
Of our old family data
To—but that doesn't matter!

Suffice it to tell—
And of this there's no doubt—
Two are younger in heart
Than they were at the start;
Held by laughter and shout,
Two grow older each day,
'Midst school tasks and play,
In the old-fashioned way!

And, so, unto us
The world smiles its best—
And we wouldn't change things
For all that wealth brings.
  In our nest
There's no danger from harm,
For around it the arm
Of dear Love holds a charm!

*Written for *Clinical Medicine.*

"SEMMELWEIS, THE OBSTETRICIAN"

I have just been reading the April number of *The Medical Review of Reviews.* Robinson's article on "Semmelweis, the Obstetrician," caught my attention at once. Never have I read a more sympathetic and illuminating story of the great Hungarian's life and work. Victor Robinson is ripening, adding to the idealism of youth the solidity and thoughtfulness of manhood, and he gives promise of becoming our American medical biographer and historian. In my opinion, this sketch of Semmelweis is his masterpiece.

What a tragedy the life of this man Semmelweis was—and yet what a triumph. From the time when he became the assistant of Klein in the Lying-In Hospital at Vienna, and was roused by the awful mortality among the poor, patient, parturient women who came to that great temple of pathologic research to be sacrificed to pyemic infection, his career was one filled with intensity and passion. He discovered a great truth—a truth which made it possible to save millions of human lives—that puerperal fever was an infectious disease, and that it could be prevented. The significance of this discovery can only be appreciated if we can bring ourselves to understand—as we can hardly do in these modern days—that in the great European hospitals of Semmelweis's time this disease not infrequently carried off a majority of the lying-in women—in some instances *every one* who might be an inmate of such an institution.

Semmelweis's discovery was revolutionary, and like all revolutionary discoveries it met with bitter opposition. Semmelweis was lampooned, assailed, driven from his official position in the Vienna General

Hospital, and finally he ended his days in a mad-house. Nevertheless, successful! I must not tell the story, for I want you to read it all, just as Robinson has given it.

The April number of *The Medical Review of Reviews* is a great issue. It is hard to select from its richness anything *especially* deserving of mention, since all is good—and the editorials especially. Yet the Semmelweis paper and Leo Deutsch's vivid description of the terrible sanitary condition of the Russian prisons, both made a deep impression upon my memory.

The Review is published at 206 Broadway, and the price is $2.00 per annum.

HELP US IF YOU CAN

We are in need of a large amount of ascitic fluid for use in our Biologic Laboratories, not only now, but continuously. No doubt many of you have cases from which this can easily be supplied. I refer to cases you may be temporarily tapping for relief as well as such as may be submitted to radical operation.

Will you not remember us at first and every succeeding opportunity, saving every bit you can? We shall appreciate this much. Ship in any quantity, in large bottles, first boiled, adding not less than two drams of chloroform to the quart.

Have whatever you send us packed very carefully, shipping collect, and then send us a bill covering all expenses and whatever you think we ought to pay you for your helpfulness. The point is that we want ascitic fluid and lots of it.

THE ABBOTT ALKALOIDAL CO.

Chicago, Ill.

ADENECTOMY AND TONSILLECTOMY WITH DIPHTHERIA BACILLI PRESENT

Some of the readers of CLINICAL MEDICINE may be interested in a report of a case of adenectomy and tonsillectomy in the presence of diphtheria bacilli.

A case of suspected diphtheria was reported in the first grade of the Harrison school. Our city health officer visited the school, found the pupil had suspicious patches in his pharynx, took a swabbing for examination, and sent the child home. On examination, no other child had evidence of sore throat, but swabbings were taken from five, and these, with the one from the suspected case, were sent to the state-board laboratory for examination. These children were then also sent home and the room disinfected.

The following morning I removed the adenoids and tonsils from one of the five mentioned above, as having no indications of disease. The tonsils were removed encapsuled, with profuse but not alarming hemorrhage. For six hours afterward the patient showed nausea and vomited a few times, but this ceased when a suitable remedy was given. The day following the operation the pulse and temperature were normal. The usual gray patches partially covered the pharyngeal wounds (not diphtheritic patches), so I ordered an alkaline spray for nose and throat.

That evening the state-board laboratory reported "diphtheria positive." The family physician was called, but as the child showed no symptoms of diphtheria, no special treatment was given. Quarantine was established, and seven days after the operation another specimen was sent to the State Board and report of "no bacilli" was received.

The patient had not been sick, so was none the worse for having had the operation, with diphtheria bacilli present. *She was better off*, for the others reported "positively" all had the disease.

CHAS. S. STEWART.

Auburn, Ind.

[This case presents several interesting points. First, the child might not have developed diphtheria, even if the bacilli were present, notwithstanding the fact that the other cases did. It is possible (though hardly probable) that the operation and the subsequent hemorrhage removed all or enough of the germs to prevent the disease, but it is more likely that it was not especially susceptible. There is another possibility, i. e., that the child was a chronic "diphtheria carrier," from whom the other children became infected.

As a general thing, we do not think it advisable to operate in a case if we know the diphtheria bacilli to be present. Of course, if the patient is a carrier, or if there is a chronic hypertrophy of the tonsils, with a mixed infection, tending to furnish a harbor and breeding place for the germ, the operation is distinctly indicated.—ED.]

HOW DANGEROUS IS ACETANILID?

There has been a great cry recently against acetanilid, which I consider entirely wrong; in fact, in my hands I find it one of the most useful of drugs. I have used it on more than 150 cases of typhoid fever when the temperature goes above 103° F., and next morning I find the patient bright and cheerful, while other patients who were left to fight out the fever with cold water were completely exhausted. One nurse asked me what that was that I gave my patients in the evening, saying, "Your patients seem to rest so nicely, while I sponge the other doctor's patients twice as much as yours and they are about as warm after, while yours look so fresh."

Now, if I can use it in 150 cases of typhoid fever without a death or any bad effects, surely, it is not very dangerous. I have frequently made calls in the night, where I found patients suffering intense agony, and inside three-quarters of an hour I left them smiling and happy, with no return of their trouble.

A year ago I was called to see a patient, who told me she suffered intense agony from 12 to 6 a. m., pain through the bowels. A specialist was called, who, after examination, told her husband that there was no hope for her, as she had tuberculosis of the bowels. But he told him, further, in order to get rid of the case where he thought there was no money, to get me, and if anyone could do her good I was the one. I told him I did not believe there was any tuberculosis, and to prove it I put her on capsules of acetanilid and quinine bisulphate, 2 1-2 grains each, and her "tuberculosis" all faded away and she never had any more pain, but was up and doing her housework in about four or five days.

I have never seen bad symptoms from the use of acetanilid, but I noticed my little daughter improved very rapidly when I gave her acetanilid when her temperature (axillary) was 104° F. and she was in a stupor; but when she would take 2 1-2 grains acetanilid compound she would rouse up and want her doll and would sing and play, while, before, she could hardly be aroused.

I am glad to see some answer to the cry against acetanilid. I have used it in thousands of cases, with no bad results, but almost always it had the desired effect.

T. C. HUMPHREY.

Portland, Ore.

[Acetanilid is like all other potent drugs—capable of harm when improperly used, as well as capable of great good, when intelligently administered. The large amount of publicity given its dangers by popular magazines is, of course, due to the fact that it is so extensively used in the innumerable brands and fashions of headache powders sold to the laity. Perhaps it is right that people should have a wholesome fear of the drug, since it is one for the physician to use, and certainly not suited to indiscriminate self-medication. On the other hand, our lay journals are creating an insane fear of acetanilid by their undigested and unwise philippics against it. Properly used, by a good physician, it is often exceedingly useful, and as safe as phenacetin, antipyrin, and a host of other coaltar remedies of which the layman knows nothing.—ED.

THE CLINICAL USES OF A NEW BISMUTH-IODINE PREPARATION

Many semisurgical conditions are capable of being benefited by medicines preventative of the further progress of the diseased state. Gastric ulcers are not always best treated by the knife, nor are they prevented by any known application of what is known by "preventive medicine." During the past ten years in numerous cases of gastric ulcer I have alleviated the distressing symptoms and in several cases established a cure, by the administration of a remedy which causes healing. Rectal

alimentation was strictly observed in all the cases.

Ulceration of Peyer's patches occurring in typhoid fever is benefited, as is demonstrated by the favorable clinical response shown by the lessening of diarrhea, hemorrhage and intestinal "griping."

Diarrhea, especially of the subacute catarrhal type, and ulcerative enteritis where hemorrhagic alvine discharges are accompanied with shreds and flakes of coagulated mucus are conspicuously benefited. The "loose bowels" of tuberculosis, with those many symptoms, which it was the former practice to control with opiates, are now frequently controlled with a harmless medicament which exerts a sedative astringent and alterative action.

Running ears, where necrotic bone-tissue is not the cause, and in many conditions of a purulent catarrhal nature, after first thoroughly cleansing, show marked improvements when coated with this substance by insufflation.

Leg ulcers, whether due to varicose veins, breaking-down gummata or some pyogenic infection, by first cleansing, and protected with a free dusting of the remedy over the surfaces and then bandaging, *secundum artem*, rapidly yield to the excellent treatment, cicatrization being secured in a much briefer time than usually obtains.

In the obstinate slight discharge of posterior urethritis, socalled gleet, which the urethroscope shows to be symptomatic of a granular and hyperemic condition, injections of olive oil containing 20 grains of iodomuth to the ounce have commonly been followed by a cure. Only once did iodism follow the application into the deep urethra, through the urethroscope, of about 15 grains. This was in a case where there was no discharge, but an intermittent appearance of shreds in the urine.

Iodomuth is the term for this chemical compound, bismuth-oxyodid-methylene-digallate. Its synonym suggests its composition and is yet ethical, in not indicating its full application; two features that commend it to notice. It is a reddish-brown impalpable powder of very faint odor, and practically tasteless. A feature of its chemical combination is that the action of light and air fails to cause dissociation of its iodine content. Consequently, it is stable under usual conditions. The juices of the primæ viæ do not rapidly dissolve it, and it, therefore, is deposited over the mucous surfaces, and thus its "topical effects" are exerted—which are desiccant, sedative, astringent, and sufficiently alterative and excitant of reparative process to be positively healing. It is, therefore, especially serviceable in burns. Lodged on the epithelium of the gastrointestinal tract, the lining cells of the tissues effect dissociation, so that there is obtained the pronounced action of the curative values found in its component parts—bismuth, iodine, gallic acid and formaldehyde.

HENRY BEATES, JR.

Philadelphia, Pa.

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[We rarely publish articles describing the virtues of a proprietary preparation, but we do so in this case because the author, Dr. Beates, is a man whose indorsement carries far and demands recognition. Few men stand higher in Pennsylvania than the former president of its state examining body, Dr. Beates.—ED.]

ACTION OF CACTUS GRANDIFLORUS

[EDITORIAL NOTE: Below we print a translation of part of a report by S. La Franca, from the Institute for Demonstrative Pathology, of Naples, as published in the *Zeitschrift fuer Experimentelle Pathologie und Therapie*, 1911, No. 2, page 437.]

By way of explanation of some of the terms employed by the author, we will premise that La Franca considers, for the purpose of elucidating the heart function, both theories that have been advanced. These are the myogenic theory, according to which the heart contracts in response to a stimulus developed in the muscle-cells, and the neurogenic theory, which assumes that the heart acts only in response to nerve stimulus.

The myogenic doctrine (see James Mackenzie, "Diseases of the Heart," Oxford Medical Publications, 1910, p. 6) was evolved through the investigations of Gaskell, who demonstrated five special

functions of the primitive cells of the heart-muscle fibers. These are: (1) The power of producing a stimulus which can excite the heart to contract: stimulus production; (2) the power of being able to receive a stimulus: excitability; (3) the power of having a stimulus from fiber to fiber: conductivity; (4) the power of contracting when stimulated: contractility; (5) the power to retain a certain amount of contraction even when the active movement has ceased: tonicity.

The neurogenic theory supposes that the internal stimulus for the heart beat rises within the nerve-cells which are present at the venous end of the heart, and that the excitatory wave is conducted by nerves. H. W. Lyle ("Manual of Physiology," Oxford Medical Publications, 1911, p. 198) says that there is very little to support such a view, and that the balance of evidence is certainly in favor of the myogenic theory.

At the end of this paper the author makes use of the terms "bathmotropic" and "inotropic," the former of which (derived from the Greek *bathmos*, i. e., step, threshold) refers to agents that influence the nervous and muscular excitability in response to stimulation; while the latter, "inotropic" (from the Greek *inos*, i. e., muscle), refers to agents that influence the contractility of the muscular tissue.]

As is well known, a fluid extract and a mother-tincture prepared from cactus grandiflora are being employed, while the concentration, cactin, has likewise been used by physicians. Orlando Jones (*La Sémaine Méd.*, 1888), who called attention to this remedy in 1888, found it to be a good cardiokinetic, although he observed, and justly, that it is not indicated in every form of heart disease. Aulde (*Therapeutic Gazette*, 1891) advises its employment as a substitute for digitalis, for the purpose of obviating the cumulative action of the latter, as also when that remedy fails. The same opinion was voiced by Myers, Wilcox (*Postgrad. Clin. Soc.*, 1891), and Ellingwood (*N. Y. Medical Record*, 1905). Boy Tessier and Boinet (*Bull. Gén. d. Thér.*, 1891) found that large doses of cactus slowed the heart function, while small doses accelerated it. Williams and Hills consider that cactus is of use in functional disturbances of the heart, also in reflex palpitation due to chronic tobacco poisoning.

Gibelli (*Gazz. degli Osped.*, Vol. XV) compares the sphygmograms of various patients (aortic insufficiency, Basedow's disease, rheumatism, chorea minor, anemia) before and after treatment, and concludes that the remedy causes an increase in the amplitude and force of the pulse. This he does not refer to an increase in the blood pressure, but to a diminution in the vascular tension, the vessels being dilated more under the influence of the blood-wave, the pulse also showing a marked dicrotism. Cactus exerts an influence upon the arrhythmia of the pulse, causing the latter to become rhythmical, in the majority of cases, without, however, altering its frequency.

Dambrosio, as reported in a recently published article (*Gazz. Intern. di Med. Chir. e Igiene*, 1910), found that cactin injected subcutaneously and intravenously does not cause contraction of the peripheral vessels in frogs and rabbits, and that its intravenous injection in dogs produces an increase in the blood pressure. In heart patients it strengthens the systolic energy of the myocardium, increases the frequency of the heart action, shortens systole and diastole, renders the pulse more frequent and strong, almost always increases the arterial pressure, and exhibits a slightly diuretic action. He considers it indicated in all cases in which the systole must be strengthened; that is, principally in aortic lesions, myocarditis, and heart weakness, being contraindicated in mitral lesions and in disturbances due to insufficient compensation.

In experiments on the isolated normal heart, I found that the systole was prolonged, the diastole broadened. The wave of stimulation at first falls and then remains unchanged. In degenerated hearts the action of the remedy was quite inconsiderable.

In two cases of myocarditis, in which the disturbance affected only the contractility of the muscle, while the excitability was

slightly increased, there occurred stronger contractions (after cactus) and the apex of the systolic line had risen higher; the frequency at the same time being influenced only very little.

In a case of insufficient compensation through aortic insufficiency, in which disturbances of the contractility and of the excitability were present, cactus strengthened the heart action and raised the systolic wave; the pulse, however, became slug-

Fig. 1. Sphygmogram in myocarditis before treatment

gish and more infrequent, and it was necessary to employ strychnine and caffeine simultaneously in order to restore the excitability of the heart.

Figure 1 shows a sphygmogram taken from a patient suffering with chronic myocarditis. The case was that of a man, aged 34, who had had syphilis and had led a very laborious life. Excitability was greatly disturbed. The patient was

Fig. 2. Same case after cactus was used.

treated with fluid extract of cactus grandiflora; after five days the pulse became more regular and the contractility showed a less irregular behaviour, although symptoms of extra systole persisted, as is clearly noticeable in the curve given in Figure 2. The patient thereupon received sodium iodide and sodium bromide, together with cactus, and in six days more the pulse yielded the sphygmogram illustrated in Figure 3.

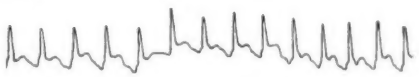

Fig. 3. Same case after adding sodium iodide and sodium bromide to the cactus

As may easily be seen from the observations which I have cited, we may assume with certainty that cactus acts upon the contractility of the heart and that the administration of this remedy produces an increase in the systolic force, and, therefore, a greater width of the arterial wave. In all patients in whom I employed it, I obtained exactly the same results.

As to its influence upon the excitability, we may assume a negative bathmotropic effect, which is very slight, in fact hardly noticeable.

One may then say that the action of cactus is positively inotropic and slightly negative bathmotropic; as to the increase in blood pressure, everything speaks for the assumption that it is caused by the increased energy of the heart or by a simultaneous stimulation of the vasomotor center.

STAND TOGETHER

I have just finished reading an article in this month's CLINIC on "Doctors, Stand Together." Why is it that so many members of our profession seem to think that they can build up their practice and gain prestige by slandering and running down the other members of their own calling?

I believe that one of the first studies a medical student should be made to learn would be that of "human nature." Our colleges teach the facts of diseases of the body—they teach the general "make-up" of man as to anatomy and physiology; but the main mental side of man, the human side, they absolutely neglect. In medical college, the student is taught of man and woman bodily, physically, but the psychic side of their make-up is ignored.

The successful physician is not always the scientist. He is not always the prize winner of his class. He is not always the best practitioner. He *is* always, however, the man who knows human nature, the one who studies his patient as well as his patient's disease. The socalled "society" doctors—who earn and make all the money in our profession, who are the only members of our calling who become rich from their practice—are frequently very poor physicians from a medical standpoint; yet they succeed in helping their patients more than a specialist could, and earn enormous fees as well. Why? Because they know their patients. They know

human nature. They have studied the psychical side of man.

Did the physicians who slander their brethren in the medical profession know human nature, they would know that it does *not* pay to "run any man down."

The general public sees little difference between one physician and another. They consider nearly all doctors alike, so far as ability and general make-up are concerned; and when I tell a patient of all the mistakes my competitors make, he immediately places me on the same level and thinks that I also must make as many mistakes. His standard for all doctors is immediately lowered. Therefore, by lowering the standard of one of our fellow physicians, we lower ourselves in the eyes of the general public.

Why cannot more physicians realize that? Why cannot they cease attacking their brother doctors, and rather devote their lost energies to boosting?

I am always pleased when I hear of some wonderful work any other doctor in my town has done—for, while it does "boost" him, it also helps me. The people say: "See what wonderful strides the men in the profession of medicine are making; they are doing more wonderful work every year"—and that includes me, also. Do you see? It helps the entire fraternity of medicine.

C. DE J. HARBORDT.

Dover, Del.

MORE GOOD POETRY BY A DOCTOR

This time the doctor who writes the poetry is one of our own number, and alive, as is the poetry which he writes. I refer to Dr. E. S. Goodhue, whose beautiful new volume of verse, "Songs of the Western Sea," now lies upon my desk. This verse breathes the freshness, beauty and eternal springtime of his own dear Hawaii, where the Doctor is known as the "Poet of the Pacific." I think it was his friend Jack London who first dubbed him by that appropriate nickname—and it may interest some of the members of the "family" to know that Jack is a regular reader of CLINICAL MEDICINE—I suspect because he is on the lookout for anything that his friend, the Doctor, may write.

I have been through this little volume again and again. While its appeal is especially to the children, typified by the Doctor's dear little daughter, whose picture provides the frontispiece, and whom we really know by this description,

> Age? Four years next July,
> Twenty-third day.
> Fair of skin, blue of eye,
> Laughing and gay,

it somehow breathes that spirit of the "western sea" which makes us older ones think of Melville and the radiant maiden of "Typee"; of palms, coral reefs, volcanos; and of the brilliant colors and sensuous odors of the South Seas. Children's verse—but all of us are children of the tropics, as we read it.

> Nowhere will fairer sky o'erspread
> Its canopy of blue;
> Nowhere will purer moonbeams fall,
> Or gentler stars shine through!
>
> Voices of maidens here are low—
> Notes of the western wind,
> Charming the ear with their cadences—
> Musical, soft and kind.
>
> Nowhere are smiles more genuine,
> Nowhere are hearts more true;
> Welcome from every isle of us—
> Welcome to each of you!

That is Hawaii, as our friend Goodhue sees it, in "Aloha Nui Oe." Now, do you want a picture of the royal palm tree of the Pacific? Here it is:

> I am royal by birthright,
> Tall and branchless I rise,
> Waving my plumes in the light,
> Lifting my head to the skies.
>
> Aristocrat, prince and king—
> Few dare deny my claim;
> Of my bearing poets sing—
> Of my dignity and name.

And here is the palm again, royal still, but telling of the eternal calm, the peace and patience of the lonely isles:

> How does it rise and soar
> Up from our sunny shore,
> Washed by rough seas;
> Free from all branching care,
> Waving with grace so fair,
> Fanned by the breeze.
>
> Reaching high over all,
> Stately and slim and tall—
> Coconut palm!
> Bearing its burden, too,
> All the bright season through—
> Patient and calm!

So we might go through the book, quoting a bit here and humming a bit there, for it is music, lacking but the lilt of an "air." There are thousands of lovers of verse among the doctors, and twice as many among their wives. There should be many of these to buy this book to read at the open window at cherry-blossom time (there is a cherry song in it), and "out loud" to the children.

The Blair-Murdock Company, San Francisco, publish the volume, which is beautifully gotten up, and the price is but $1.00.

OUGHT TO BE A WEEKLY

I like THE AMERICAN JOURNAL OF CLINICAL MEDICINE and look forward to each issue with the keenest pleasure. The only criticism I have to offer is that it is not published weekly instead of monthly, so the good things would come oftener.

C. P. FORDYCE.

Manley, Nebr.

LYDSTON'S "SEX HYGIENE FOR THE MALE"

Sex Hygiene for the Male. By G. Frank Lydston, M. D. Chicago: The Riverton Press, 628 S. Clark St. 1912. Price $2.25.

So many books on sex have appeared lately, particularly the sort offering counsel to the growing male, whose education along this line has been neglected, that we shall soon be asking apologies from those who venture to impose similar books upon us.

There is, however, room for *this* book, which I have just read with great interest and profit. While it contains much that I have seen elsewhere, and seen repeatedly, its facts are so uniquely, forcibly, and fascinatingly presented as to compel one's attention and almost persuade him that the entire matter is new. There is, however, much new material in the volume, material that will well repay attentive reading.

One often hears of "readable" books. Dr. Lydston has written a book more than "readable"; once started, you have to read it. Whatever else may be said about Lydston, he is never trite. The reader of any of his writings may be reasonably sure of finding originality of theme and treatment.

Most books of this sort are disappointing. They say very little, while purporting to say a great deal. They are little more than collections of silly platitudes and wishy-washy chapters. They are saturated with cant and permeated with the rankest sophistry.

But this is a different sort of book. As is well known by our readers, the author is a man who is accustomed to handling things without gloves, and he does so in this instance; he says what he means, here, forcefully and to the point—there is no beating around the bush in the three hundred and odd pages he has given us.

Naturally, it is to be expected that a physician who has practised the genito-urinary specialty as long as Dr. Lydston has would get some out-of-the-ordinary views and that he would be able to give us something really new, if not startling. The observations of such an experienced specialist and keen observer as Dr. Lydston ought to be interesting and his suggestions worth serious consideration.

Of course, some people will not agree with all that he, the author, writes; I, myself, have never read a book on this subject, or on any other for that matter, whose every page I could stamp with approval. For example, the author is opposed to the segregation of prostitutes, while offering no immediate remedy for the evils that spring from their vocation.

"Segregation," he says, "is an advertisement for prostitution, which not only informs the youth where certain dangerous merchandise can be procured, but also is interpreted as a recognition of the prostitute's evil wares as a necessary commodity."

Yet he sums up the situation pretty correctly when he admits that "prostitution is an incurable social disease; which we should accept as inevitable."

The author urges that the mass-mind be educated to recognize the dangers of the vice, looking to the ultimate wiping out of the venereal diseases, which of course

is all right as far as it goes. But, I believe, and always have believed, that the quickest way to accomplish results is by segregating and regulating prostitutes (which has never been done seriously in this country, but only in a slip-shod way) and by taking away the "sting of poverty" that drives many of our growing girls into the irregular life.

But this is not written to take issue with the author in any particular, but to call the attention of the medical profession and the public to this most vaulable work. Young men should be educated in a knowledge of sexual hygiene; they should be instructed as to the dangers incident to the irregular exercise of the reproductive function. They should be warned of the pitfalls and dangers which beset the pathway of dissipation; they should be instructed in the knowledge that venereal diseases are the almost invariable concomitant of licentious living.

Considered from an exalted point of view, sexual life is beautiful as well as good. What there is in it which is shameful and infamous is the obscenity and ignominy and disease caused by the coarse passions of egoism and folly, allied with ignorance, erotic curiosity, and mystic superstition, often combined with social narcotic intoxication and cerebral anomalies.

These matters should be presented sanely and convincingly to the young men of our nation, and there is no book with which I am familiar that does this so well as does this one of Dr. Lydston's.

Of course, as I have said, some people may decidedly disagree with the author as to methods and disapprove of his manner of presenting the subject. But of Dr. Lydston it can never be truthfully said, "He was damned by faint praise". Equally true is it that he has never been praised by faint damns; for his friends have been as generous with commendation as his enemies have been with condemnation. For all that, I am sure that no intelligent person, whether friend or enemy, prude or otherwise, can read this book without thanking Dr. Lydston for having written it.

I regret that I have no space to dwell more at length upon the interest and grace which Dr. Lydston's versatility and rare literary talent lends to his work.

GEO. F. BUTLER.

Chicago, Ill.

THE A. M. A. MEETING AT ATLANTIC CITY

We hope to meet many of our friends at the Atlantic City meeting of the American Medical Association, to be held at the great New Jersey sea-coast resort, June 4–8. The representatives of CLINICAL MEDICINE will be distributed among the following hotels: The Berkshire Inn, Hotel Edison, Hotel Hygeia, Young's Hotel, Avon Inn, The Netherland and The Lexington.

These are good, comfortable houses, the prices are moderate, and we are sure that, if they please us, they will please our many good doctor friends who will be in attendance at this great meeting. We shall hope to see as many of you there as possible.

Why not come a few days earlier and attend the meetings of the American Medical Editors' Association, which will be held on Saturday, June 1, and Monday, June 3?

THE DOCTOR'S DREAM

A winter's night. The north-wind keen
Blew cutting snowflakes thick and fast,
While here and there a crisp brown leaf
Vied with the flakes in rushing past.
Pale moonbeams through the rifting clouds
A silvery sheen of beauty wrought.
The hoot-owl's melancholy call
Was answered by the mate he sought.

Along the drift-strewn dreary road
The village doctor, wending home
From duty's call, fell fast asleep,
Not fearing that his steed might roam.
He drifted into Dreamland realm,
Where sunny skies are wondr'us fair—
Sweet sleep, in which we cease life's war
And spurn earth's sorrows, tears, and care.

And, as he slept, the dream-queen came,
To lead him gently by the hand
In paths that once he seemed to know—
Familiar paths in Backward-land.
But, strange to say, Time's clever touch
Had deftly modeled things anew,
And, where the thorns of trouble were,
Now fragrant flowers of beauty grew.

The faces of old deadbeat friends
Wore pleasing smiles as, with their hands
Outstretched, they strove to give him cash;
And houses grand and choicest lands
Were given him as rightly earned.
A tongue once sharp as any knife
Now whispered softly in his ear,
"God bless; you saved my baby's life."

A crowd of eager patrons came
To grasp his hand and loud declare:
"We're back; regretting that we left.
The fault was ours; you acted square."
Close by his path a woman kneeled
And plead with God her life to save:
"Oh, let me live, to scatter flowers
In gratitude upon his grave."

Competitors of former days,
Whose tricky ways had been unjust,
Now came with humble, contrite hearts
And knelt beside him in the dust.
A gossip-monger, old and gray.
Who scattered lies and guzzled rum,
Held up her hands in mute appeal;
She could not speak, for she was dumb.

Just then one wheel fell in a rut,
The dream-queen dropped the doctor's hand;
The horse was cutting down the road
A speed to beat the village band.
The doctor felt the north-wind keen,
His nose a cake of ice did seem.
A signboard showed him far from home—
And this was real; it was no dream.

A. D. HARD.

Marshall, Minn.

THAT SANITARIUM FOR OLD PHYSICIANS

We have on hand a number of letters from physicians in support of our propaganda for the establishment of a sanitarium for old and disabled physicians and their families. We are sorry that we are unable to give room for the publication of these letters in this issue, but next month they will be used.

There should be an institution or institutions of this character, and the idea must be kept alive. Help us to do this. Meanwhile let us hear from many more of our friends upon this subject.

SURGICAL AND OBSTETRICAL DIFFICULTIES IN COUNTRY PRACTICE

November 10, last year, a man dropped into my office with pale countenance and his left hand wrapped up in many thicknesses of sackcloth and shawls. It was a case of getting the hand into a corn-sheller. Unraveling the temporary wrappings, I found moderate hemorrhage, four fingers torn off, with splinters of bone and ragged, tattered flesh dangling at their ends. The thumb still was left, but had all the flesh on both sides scraped to the bone and parts of that splintered. But this apparently was not the most of the injury. The hand, at the middle of the metacarpus, looked to me as though it was nearly amputated, needing but little effort to separate the lower segment from the rest of the hand. I was all alone, except for my wife.

With a preliminary hypodermic injection of hyoscine and morphine, I administered chloroform and tried to render this greasy blood-mass aseptic or as nearly so as circumstances would allow. The little finger, ring-finger, and middle finger were amputated at their digital extremities, where the first row of phalanges articulate with the second. The index-finger was amputated at the middle of the shaft of the second internode. From the thumb I removed several splinters of bone. The dorsal surface of the metacarpus presented a gap two and one-half by three inches, just missing the carpus and extending down to within one-half inch of the metacarpal extremities. A piece of flesh was also torn out in the palmar surface about one inch below the unciform bone. All the extensors, adductors, and interosseous muscles were torn away and large pieces of bone from each shaft were sticking out of the wound. These were clipped off with bone-forceps, all badly damaged tissue and skin flaps were removed, and the hand was wrapped up.

After eight three-daily dressings, this man now has a pretty useful hand, strange as it may seem. He retains quite a grip with the thumb and one and one-half internode of the index-finger, and, as the first row of phalanges is still left, these also help him to a certain extent. But the most remarkable thing was that the large wound of the metacarpus granulated without any pus formation, leaving at present just a little groove across the dorsum of the hand, the last piece, about the size of a nail, being the slowest to heal up.

In quite an extensive obstetrical practice, the case I am about to relate now was among the worst ones encountered. In December last I was called to a woman living about one mile out in a pasture where no one with buggy, cutter, sleigh or automobile would dare to penetrate. The place was inaccessible, save on foot and by going through several barbwire fences and crossing small ponds and icy brooks. The house was a small unpainted frame structure with two downstairs rooms—kitchen and bedroom. Called at 12 o'clock midnight and wading through lakelets and auguring through fences, with a pair of satchels, I finally arrived at this woman's abode. Making a vaginal examination, I perceived that "there was nothing doing" that night, so I returned by the way I came.

The next evening about nine o'clock the man applied again for assistance. As the evening was well advanced and the road strenuous, I decided to remain for the night. I made three vaginal examinations at intervals of an hour and, finding no engagement, but the anteversed uterine fundus, I retired to a small room upstairs, waiting for developments. At 9 o'clock next morning I again returned home, thinking the labor-pains were not yet strong enough for any interference. In fact, the pains had by this time entirely ceased. I told the couple that the position of the uterus was rather abnormal, but it probably would correct itself as the pains grew stronger.

I was very busy during the day, so that, on coming home at 6 o'clock, I was looking forward to a square meal. But this was not to be. The whole village and surrounding country was now thoroughly stirred up—all the relatives and friends within twenty-five miles had arrived, anxious to see this woman "that was pained to be delivered" and no deliverance in sight. At this juncture I should gladly have given one hundred dollars to charity if some worthy brother had taken charge of the case. However, though the husband was as poor as the proverbial church-rat, this woman needed assistance and, under the circumstances, what conscientious doctor could refuse her help? During my wandering through the frozen fields I stopped and looked up at the sky where thousands of globes were scintillating in the dark night—where stars, moons, suns, yea, and constellations wheel and blaze, and I wished myself just a speck of inanimate matter somewhere in the abysses of space. But here I was, not inanimate, but a responsible human being—so I walked slowly toward the house of distress.

Again scrubbing up my hands and proceeding to examine the woman, I found conditions as before—the os pointing toward the promontory of the sacrum. However, labor-pains were increasing. Placing the woman in the knee-chest position, I was able to locate the os, which felt patulous for about one inch. Inside the os I could feel a soft mass. By external palpation I found the fetus to be lying transversely.

A neighboring physician happening to be in the town, I called him in consultation, in this unpleasant predicament. After the lapse of two hours we put the woman on the table and brought her under the influence of an anesthetic. I now managed, with some difficulty, to bring down one foot. This, serving as a wedge, checked any hemorrhage that was to be expected from the marginal placenta prævia. This done, the rest came comparatively easy, until the after-coming head presented. But both of us together finally succeeded in delivering the child, although dead. Then the hemorrhage was checked. Considering the surrounding difficulties—the small room, hardly any utensils and not even all the needed water at hand, with the woman on the only table in the house, it was a wonder that she got along as well as she did. She made a rapid recovery. This was her eighth child and she had never had any trouble before.

H. C. Henriksen.

New Market, Minn.

NEWS NOTES

Dr. Abraham Sophian, of the Rockefeller Institute, expert in the treatment of meningitis, was given a check for $2500 by the city of Dallas (Texas) in recognition of his services during the recent epidemic of cerebrospinal meningitis.

DR. WALDO BRIGGS, owner of the St. Louis College of Physicians and Surgeons, has entered suit for damages to the amount of $200,000 against the members of the Missouri State Board of Health, because that board has stricken the school from the accredited list of the state.

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DR. CARLOS FINLAY, of Havana, the man who, more than any other, cleared up the mystery of the distribution of yellow-fever by the mosquito, and thus made it possible to eradicate it, is being urged by various scientific societies of this country to become a candidate for the Nobel prize. Get your society to indorse him.

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COL. WILLIAM C. GORGAS, who had charge of the sanitary work in the construction of the Panama Canal, was one of the principal speakers at the National Drainage Congress in New Orleans, in April. It has been proposed that Dr. Gorgas be engaged to rid the swamp-lands of the United States of the deadly malarial mosquito. It is estimated that 250,000 persons die in the United States each year as a result of disease transmitted by the mosquito.

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THE December-January number of Dr. Harrower's live little publication, *Successful Medicine*, contains an article by Dr. W. C. Abbott upon the general topic, "Why Is the Remuneration of the General Practitioner so Low?" Some of you may enjoy reading this article, which deals with the problem in a somewhat unusual way. *Successful Medicine* is making a hit. It is cheap, too —only twenty-five cents a year. If you want it (as surely you do), write to Dr. H. R. Harrower, 60 W. Randolph St., Chicago, Ill.

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DURING the year 1911 there were only 39 cases of typhoid fever among the 45,000 men in the United States army. In other words, one case to two thousand men. This low percentage is ascribed to the protective inoculation with typhoid vaccine. It is predicted that this vaccination will be so perfected that before long one inoculation will protect an individual for five years. Major Russell, of the Army, says: "The time is here when typhoid fever can almost be eradicated by preventive measures. The cost of these measures is so small that the fee of expense has no weight."

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THE Annual Meeting of The American Medical Editors' Association will be held at the Marlborough-Blenheim Hotel, Atlantic City, N. J., June 1 and 3, 1912. Dr. Thomas L. Stedman, editor of *The Medical Record*, will preside, and an attractive program is being prepared. The annual banquet will be held on the evening of June 3. Every medical editor and all those associated in medical journalistic work will find this meeting worth attending. Your chance to become acquainted with a bunch of good fellows. Why not join us?

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THE June issue of *The American Journal of Surgery* will be the "Greater New York number." It will include among its contributors the following well-known surgeons, all dwelling in the metropolis on Manhattan Island: Herman J. Boldt, C. N. Dowd, Meddaugh Dunning, Wm. S. Gottheil, E. L. Keys, Jr., Howard Lilienthal, Chas. H. May, Willy Meyer, Robert T. Morris, S. Lewis Pilcher, John O. Polak, James P. Tuttle, and James P. Warbasse. Evidently the assault of *The Journal of the American Medical Association* upon the contributors to this truly "independent" journal has had no effect upon the great surgeons of New York. MacDonald's *Journal* is growing better all the time.

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HERE is a resolution which is somewhat out of the ordinary, passed by the Webster (Iowa) County Medical Society, November 28, 1911: "Therefore, be it resolved: That it is the sense of the Webster County Medical Society that some system of division of fees be adopted, and generally followed, which shall be without secrecy and be fair and just to the patient, family physician, and operating surgeon or specialist. That we believe a spirit of fairness requires that the family physician and operating surgeon should be paid according

to responsibilities which each assumes and bears in referred cases, but that the patient should always know that this arrangement exists."

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DR. RUSSELL BROUGHTON, one of our old friends, and founder of the sanitarium which bears his name at Rockford, Illinois, died April 4 of angina pectoris. The doctor was a native of Wisconsin, saw service in the civil war, was married in 1869, in which year he was graduated from Rush Medical College. For ten years he was associated with the Keeley Institute, of Dwight, Illinois, taking possession of the sanitarium at Rockford, in 1902. He was a man of marked ability and lovable personality. He will be greatly missed.

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THE connection between the University of Illinois and The College of Physicians and Surgeons, of Chicago, will be terminated in June. This is due to the miscarriage of a plan for the appropriation of $60,000 a year for the equipment and maintenance of the medical school as provided by the Forty-Seventh General Assembly. This appropriation was held invalid by the State Supreme Court. The State University is now asking an appropriation of $250,000 for the erection and maintenance of the necessary plant to give instruction in the first two years of the medical course at Urbana. It is said that the work of the College of Physicians and Surgeons will be continued in Chicago, as it was prior to being taken over by the University of Illinois.

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WE frequently have applications for physicians. Here are three samples of locations on hand right now. Number one: Small village in Ohio; nearest physicians five and six miles, respectively; village only recently without a physician. Prominent business man of this community has written us asking us to locate a young man, preferably one with hospital experience. Number two: Location in southern Alaska; physician now there going abroad for postgraduate work; makes $5000 or $6000 a year; says a good man can make $300 the first month, and more the next, if he "makes good." Some money—not much—required. Number three: Town of 1500 in Illinois; only one other physician; railroad appointment; present occupant making $4500 a year, practically cash; will sell with or without property. This is a bargain, as the doctor must go southwest on account of wife's health. If you are interested in any of these, communicate with us immediately.

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DURING 1911 the Illinois State Board of Health examined 646 physicians for licensure in this state; only 432 were successful, 33 percent having failed to make the required grade. This is the highest percentage of rejections in the history of the State Board of Health. In 1910 Illinois rejected 13.7 percent of all applicants, as compared with 2.2 percent in Michigan, 3.4 in Iowa, 5.5 in Ohio, 6.4 in Wisconsin, and 8.5 percent in Indiana. Fifty-four colleges of the United States were represented in the examinations of 1911. The three leading colleges of Chicago (Rush, Northwestern, and the College of Physicians and Surgeons) contributed 41 percent of the total number of applicants. During the same year 179 osteopaths and other drugless healers were examined by the board and only sixty-one were successful. Out of 178 midwives who took the examination, only 47 passed. Thus the record of the Illinois Board will certainly compare favorably with that of other states.

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THE Robert Dawson Evans Memorial Building of the Massachusetts Homeopathic Hospital, was dedicated March 6, 1912, at eight o'clock. Among the speakers, we notice the names of Drs. Walter B. Cannon, Frank B. Mallory, James J. Putnam and Elmer E. Southard, of Harvard Medical School, and Dr. Timothy Leary, of Tufts Medical School. This new building is not to be used exclusively for hospital purposes. Among other things it will provide an opportunity for popular lectures on hygiene and other subjects of importance entering into the daily life of the people. On the fourth floor of the building, there will be seven large laboratories for special research work and special facilities will be provided

for further investigation on the clinical side. The building is connected with the Boston University School of Medicine. The activities of the entire building will be under the supervision of Dr. Frank C. Richardson. We congratulate our homeopathic brethren. This school of practice in Boston, Philadelphia, Chicago, and elsewhere is evidencing intense interest in scientific research work.

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In a recent number of Clinical Medicine we suggested that the best thing to get the membership out, in some of these moribund medical societies was "to get into a good lively scrap." This item from Clinical Medicine was reprinted in a bulletin of the Madison County (Indiana) Medical Society and this was the comment of the secretary: "If you have a grouch come out and air it. In fact the Secretary of this society from one hand offers you an olive branch, in the other a club, and cares not which you take. If you have one atom of professional patriotism left in your composition come out and prove it. The officers of this Society are of the milk of human kindness variety. The seventeen members who attend regularly, occasionally, and semi-occasionally, volunteer to act as sponge bearers and rubbers. Take a hitch on your pride and don't compel us to act as pall bearers."

Good, that's good! We congratulate the lady-secretary of that society upon dictating terms to the membership in such an energetic way.

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We learn from a Cincinnati newspaper that *The Lancet-Clinic* has changed hands. The majority of this stock was the property of the editor, the business manager, and head of the printing-plant, Dr. A. G. Kreidler, Dr. George H. Strobach and Mr. William Ingram, respectively. This stock was turned over to Dr. C. R. Holmes, and the amount paid was reported to be $6300. Dr. Holmes is a representative of the Cincinnati Medical Civic Association, of which *The Lancet-Clinic* will become the mouthpiece. It will also be used to promote the interests of the local profession, the new city hospital, and the Cincinnati University. Dr. George H. Strobach will remain business manager and William Ingram, who has been connected with the journal for twenty-seven years, will be retained at the head of the printing department. Dr. Kreidler retires from the editorial chair. We shall be very sorry to lose him. He is a fine gentleman and able editor. Success to him elsewhere. For many years *The Lancet-Clinic* was the property of Dr. J. C. Culbertson, who died eight years ago.

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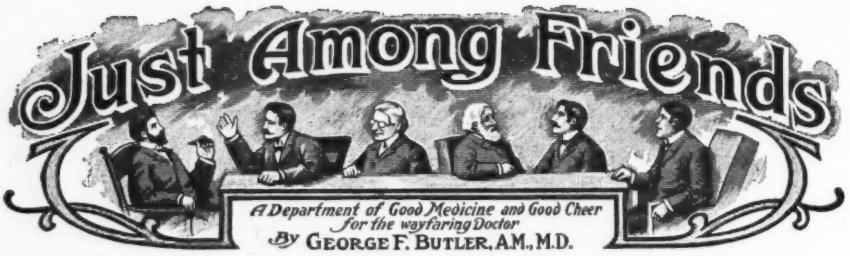
Even in poetry Clinical Medicine is "the one best bet." We have felt all along that sooner or later even the professional poets would have to come to us for inspiration—and here they are already. At least W. D. Nesbit, the baldheaded warbler of *The Chicago Evening Post*, has reached the point where he takes up every new copy of our journal "with anticipations of rare delight." In a late number of *The Post* he quotes approvingly two stanzas of Dr. Boyd's poem on "The Treatment of Lobar Pneumonia," upon which he lavishes two stickfuls of well-merited encomium. He says: "We rather like the whole poem. We have never had pneumonia, and we don't want to have it now, but it must be a cheering thought to a patient to know that his physician isn't going to give him anything that doesn't rhyme. We shall impatiently await some medical poems on such topics as 'The Latest Treatment of Gastric Fever,' 'Lines on the Cure of a Cold in the Head,' or 'What to Do in a Case of Bilateral Arthritis.' And we'll wager that Dr. Boyd could make an operation for appendicitis seem like a stroll through a Carnegie library."

Nesbit really has the makings of a good medical poet. His well-meant ode, entitled "To a Bald Spot," was not without merit, though somewhat overwrought—as was natural enough. If he will continue to sit at the feet of our select bunch of medical muses he may sometime be able to write really moving stuff for his own column. We shall watch it closely, hereafter, for sonnets with titles like this: "Be Still, My Love—'Tis But the Itch."



THERE is probably no human ailment requiring more perceptive skill on the part of the physician than insomnia. To treat this insidious malady empirically, is simply to defeat the object of therapeutic science. Doubtless there are certain cases where the employment of rational medicine, including the judicious administration of drugs, may prove beneficial; but every practitioner is familiar with certain conditions in which the etiology of the disease is of paramount importance. In a word, it is the psychological rather than the pathological aspect of the case which demands consideration.

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It is one thing, speaking practically, to lie awake over the persistent annoyance of a recalcitrant trial-balance; it is quite another to brood over loss of wife or children or count the hours and minutes that intervene between popular credit and confidence and the humiliating confession of bankruptcy. The physician who fails to discriminate between physical and psychical phenomena betrays gross ignorance of human life, though his professional skill may be outwardly irreproachable.

It will never do to theorize concerning so insidious a complaint as insomnia. Its causes lie deep in actual history and experience; the positive suffering entailed by its acute visitation are wholly imperceptible to the practitioner whose average rest of seven or eight hours represents a normal condition of health. He must probe the occult sources of derangement, especially where physiological conditions indicate no organic lesion, and diagnosis is limited to psychological data not always discernible in the supersensitive and secretive subject. The considerate master of the healing art should realize that he is dealing with tragedy, not symptoms of well-established, purely scientific disease. A close study of "Hamlet" would be worth to him more than a multitude of textbooks.

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There is one sovereign remedy, though infrequently adopted, which, to judge by many cases, seems to be generally efficient; I mean entire change of scene, and new air, new surroundings, new thoughts. New associations create a wonderful revolution in a mind, to the morbid ratiocination of which the evil of insomnia in such victims is largely to be assigned. But the remedy does not always prove efficient. The true release appears to lie in the sterling resolve of the individual: a calm, reflective contemplation of difficulties, and resort to early retiring, at which time sleep is most refreshing and the cares of the day just closed enjoin and necessitate rest.

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The evil of substitution in compounding physicians' prescriptions is growing to an alarming extent. The argument that "this is just as good" is an evidence that the article recommended possesses merit, and it is an outrageous injustice to the physician and patient alike to substitute anything for the medicine prescribed.

The person who is primarily interested in a prescription is the one who writes it, and it is supposed to call for the medicine which in the prescriber's judgment the patient requires. The latter consults the physician because he believes the doctor can render him valuable service, and any practitioner who has any conception of his high calling will prescribe only the remedies he thinks are likely to produce the best results. No medical man is worthy to

be called such who does not exercise as great care in the selection of his remedies as he would in the preparation of his patient, instruments, and hands previous to the performance of a surgical operation. To put it more strongly: the physician who is careless regarding the medicines prescribed is as culpable as if he were negligent or unclean while performing a surgical operation.

Every surgeon of any standing sees to it that his assistants dress his patients properly, and that the antiseptic solutions are of the nature and strength that he desires. How many physicians are equally careful about the remedies they prescribe for internal use?

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I am charitable enough to believe that the average pharmacist is honest, but we all know that there are some among them who are not and who would unhesitatingly resort to substitution to gain an extra ten cents. I am suspicious both of economical doctors and druggists. Economy in these professions is dangerously close to dishonesty.

It is undoubtedly a fact that substitution could not exist to any great extent were it not for the carelessness, amounting almost to criminal negligence, on the part of the physicians. The doctor has done but half his duty when he prescribes for his patient. He should see to it that his prescription is properly filled, and never will substitution be reduced to a minimum until the physician who writes the prescription demands that it be filled exactly as he wrote it.

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This will not reform any dishonest druggist, but it may improve some careless doctor. If a man is dishonest, there is no more use in preaching honesty to him than there is in preaching cleanliness to vermin. This matter is getting serious and it is time to call a halt. If pharmacists and physicians would but be honest, instead of being subservient slaves of greed, trifling with life and death in order to acquire a few handfuls more of yellow dross, which they know full well they must leave upon the threshold of eternity, there would be no cause for complaint. The two foulest frauds and most heinous humbugs in all hell's unclean hierarchy are unquestionably the unscrupulous doctor and druggist.

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There was a time when it was the test of an author to write a good book, and, unless he could do this, it was better for him, financially, to cling to his old job, whatever that happened to be. But things have changed most wofully and wonderfully during the past few years, and it is now up to the publisher to make "any old thing," that just has in it the semblance of a story, the "greatest work of modern fiction ever produced."

It was once the evidence of genius to write a book that would be read by a few thousand people, and the value of the book was judged by the number of these thousands.

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But now! The author is simply a machine. He is given to understand that a story in a certain vein will "go" with a hungry public, and so, with a model in hand, he gowns it as he judges the public might wish it gowned. And the enterprising publisher does the rest.

In the ranks of these one-day writers of fiction does genius bubble, and, from the old-fashioned, plain, unpretentious, straightforward announcement of the publication of a book from the pen of a tried and true author, has developed the flaring, questionably picturesque advertisement that, in itself, is a more wonderful "work of modern fiction" than the book it "barks" for.

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This merry game seems to have been inaugurated when "Trilby," which was brought out by the Harpers, turned the world topsy-turvy with its tremendous sale. It was hawked as was Green's Nervura, testimonials and all. Even the pulpits did their part by loudly criticizing it. Not to be outdone, Appleton then brought out Hall Caine's "Manxman"; and it was a war for fair as to which of these two unknown writers would outsell the other. The methods of promotion were identical—printers' ink, pulpit con-

demnation, dramatization—and one died as dead as the other, and both are forgotten.

Each year since then has seen practically the same tactics pursued, as far as possible, though the clergy somehow have failed to do their part in the promotion business. Author after author has been launched upon the public, which, according to the fabling of the enterprising publishers, has raved with increased vehemence over each new volume that was turned loose by houses of sufficient financial standing to stand the strain.

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The most striking example of the abnormal in book selling was seen in the case of that estimable book, "David Harum." By leaps and bounds it went into edition after edition, until a full half-million copies were needed to supply the demands of the enthusiastic public. Just think of it! Five hundred thousand copies of one book, and one, too, that could be but a momentary pleasure; it did not boast a single chapter that would instruct. And though not old enough to be soiled in the covers, it has gone out and from us, never to return. This book planted a seed, though, and the seed has borne the heaviest crop of as mediocre and really worthless literature as could have been expected—a crop of books, struggling for popularity with their gaudy, glittering covers, slap-dash typography, whose excuse for existence is some trivial story of a certain phase of life, and this story surrounded and bulked up with words, and words, and words.

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Of course, enterprise is to blame for this miserable decadence. Publishers, hack-writers, newspaper reporters, and department editors easily sized up the great reading public, with the result that the book-stalls were glutted with tales of country life: dissertations on the farmer and his herd and revamped love stories made over with whatever good English the authors may have possessed, or muddled into a dialect that has no claim on life. "Eben Holden," it has been claimed in heavy black-face type, has sold into the hundred thousands, and more; and because of this, the same author's "D'ri and I" has sold quite as well. Their demise followed the reading. In the same vein was "Quincy Adams Sawyer," which, though its enterprising publishers claimed for it a skyrocket sale of many thousands, is now dead and forgotten, never to be returned to life. Indeed, the whole brood of these inane literary concoctions is tumbled into dust, and now the American public, enthusiastic even to idolatry, is on the *qui vive* for the next crop that may be heralded by the publishers who hold the watches and listen to the throb.

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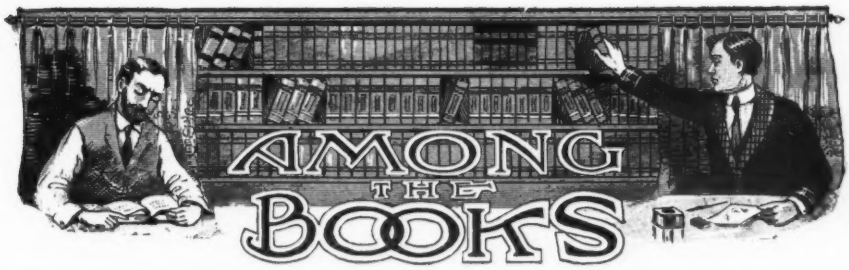
Now that the year's rejuvenescence is at hand and the joyous miracle of spring renewed, we can but consider how simply and easily nature attains her ends. A little preparation and combination of a few chemical elements in her vast laboratory, and, lo, the earth awakens to beauty and luxuriance. The hillsides and the streamlet's shores are decked with wealth of verdure starred with the floral gems which nature scatters so lavishly; a pearly light in the far horizon relieves the darker woodlands, while the nearer aspect reveals a varied loveliness of form and hue such as artists strive to portray, yet the secret of whose harmonious blending remains forever hidden. Save for the winter-wheat, there is no pure color, the motife of the landscape being expressed in delicate neutral tints and subtle gradations of deeper tone along the borders of the woodland and the changing tillage of the foreground. The palette of the studio may well despair of so perfect an attainment, for art at its best can not convey the impression of the lambent air, the sense of a balmy atmosphere, which transmutes all visible objects into beauty and awakens in the mind and heart emotions of the purest delight.

Well were it for mankind could they reach this blessed calm, this fine repose of creative power wherein the most varied activity might still find rest. It is the great patience of Mother Nature which enables her to rear her offspring and provide for this maintenance so faithfully. Poor, fretful mortals, clutching at rainbows, forever striving after the impossible, why can ye not learn of her?



SENATOR AND KAMINER'S "HEALTH AND DISEASE"

Health and Disease in Relation to Marriage and the Married State. Edited by Prof. Dr. H. Senator, and Dr. Med. S. Kaminer. The only authorized translation from the German into the English language by J. Dulberg, M. D., of Manchester, England. New York: Rebman Company. 1912. Price $5.00.

At the time the reviewer examined the book under discussion, the press of the country was discussing, editorially, the announcement of the Right Reverend C. P. Anderson, Bishop of Chicago, that after Easter the Episcopal clergy of the diocese would refuse to marry any persons at the cathedral unless they present certificates of good health signed by reputable physicians to the effect that they are normal physically and mentally and have neither an incurable nor communicable disease. This decision of the clergy marks an important step in the direction in which the eugenic movement of recent years has been aiming, and is in line with laws recently passed in the state of Indiana and in some western states, that the contracting parties of a marriage must present clean bills of physical and mental health.

Although in regard to legislation we are probably pioneers in this direction, at least in modern times—although similar provisions have been made in antiquity, notably in Sparta—the movement is by no means new, and receives a strong impulse by the volume edited by the recently deceased Prof. H. Senator and by Dr. Kaminer, which appeared in the German original a few years ago. The reviewer believes this work to be of sufficient importance to introduce it in the words of Prof. Senator himself, whom he will quote after a few preliminary remarks.

As was to be expected, the book was very soon translated into other languages, the edition in the English language being prepared by Dr. J. Dulberg, of Manchester, England, and published by The Rebman Company. An abbreviated popular edition was announced in CLINICAL MEDICINE for 1910, page 717, when the reviewer briefly discussed the importance and desirability of a work like the present one.

Of the twenty-seven chapters in which health and disease in relation to the married state has been discussed by the most notable physicians and clinicians of Germany, we will mention here only the chapter on "inherited and congenital diseases, and predisposition to disease," by Prof. John Orth, the successor to Virchow; the chapter on "consanguinity and marriage," by Prof. F. Kraus; that of "sexual hygiene," by Prof. P. Furebringer; on "constitutional diseases," by Prof. H. Senator; on "Diseases of the digestive organs," by Prof. C. A. Ewald; on "gonorrheal diseases in relation to marriage," by Prof. Neisser, the discoverer of the gonococcus bearing his name. These may suffice to show how completely and efficiently all possible questions in which the relation of marriage to health and disease might be discussed have received attention.

To quote some remarks made by the senior editor, Prof. Senator, in the introduction to the book:

"There appears to be every justification for the attempt, made, so far as I know, for the first time by the present manual, to collect all these questions into a comprehensible *ensemble* that shall serve to the

medical man as a source of information, as a guide to his conduct in circumstances affecting the weal and woe of so many human beings. For may not the dictum of the physician have a decisive influence upon the future of whole generations?

"It should be sufficiently clear that matrimony, with all its consequential conditions, presents an enormous field to the activity of public health and of preventive medicine. We have only to think of the number of marriages which are constantly being entered into without any regard to the physical condition of the parties contracting them, without any attention being paid to their constitution, state of health, descent or possible hereditary predisposition to disease."

"It is above all necessary that the medical profession should become familiar with all the conditions bearing on the subject and that it should be consulted before the consummation of intended marriages as well as during married life. There is no more proper person for this than the ordinary family practitioner, who knows the histories of the patients entrusted to his care and therefore has unequalled opportunities for observing them from their childhood or even from their birth.

"It is not unreasonable to hope that, when the knowledge of the relations between marriage on the one hand and health and disease on the other will have become more general in medical circles, the profession, by its exertions and by instruction, explanations and warnings, will succeed in convincing the larger public as to the utility, aye, necessity of taking into consideration the physical condition of the parties contracting or living in marriage.

"It can hardly be expected or demanded that this conviction shall result in submission to medical authority in absolutely every case. There may arise occasions when considerations of health or even life would have to yield to others far more weighty and when medical opinion would be obliged to give way to circumstances of superior force.

"It were also desirable that the state or the municipalities should devote greater attention than has hitherto been the case to the somatic conditions of persons about to marry or already married. . . . . From the standpoint of public health and the preservation of the national energy, marriage deserves the fullest consideration, much more than it has generally hitherto received, because its importance to the physical and mental welfare of humanity goes further than the desire for a healthy and vigorous offspring. Apart from the sphere of procreation, it has numerous relations to health and disease; namely, in three directions: Marriage would be, on the one hand, a source of disease or the aggravating cause of preexistent diseases; *vice versa*, diseases or physical defects can have a disturbing and detrimental influence upon marriage; and it is, finally, possible for marriage to consummate the cure or alleviation of conditions of ill health."

These citations are only a few of the many points of view from which the marriage relation has been discussed in this volume, which we unhesitatingly claim to be one of the most important publications of the century. It is certain to have a profound and weighty influence upon the marriage problem, which is being agitated more and more by physicians and sociologists, and which is of the greatest importance, not only to us individually, but to the state as an entity.

We have rarely read a book that in its dignity of language, in its profundity of thought and clearness of diction surpasses this work of Senator and Kaminer, and we urge every physician to study this monumental treatise carefully and to spread the truths contained in it to the best of his ability.

HUTCHINSON'S "FOOD AND DIETETICS"

Food and Dietetics. By Robert Hutchison, M. D., F. R. C. P. New York: William Wood & Co. 1911. Price $3.00.

This is the third edition of this book, which now reaches the proportions of over 600 pages.

A lengthy review of a work so well known and widely read, in medical and scientific

circles, is hardly necessary. It is sufficient to repeat that it covers the subject of dietetics very completely. For the physician who would limit his library to but one or two books on dietetics, this would be a very good selection. It is comprehensive enough for purposes of consultation; a book which the busy doctor can go to with the certainty, most generally, of finding what he is seeking in the way of information. It is authoritative; is well indexed; contains elaborate tables showing the composition of various foodstuffs; while at the end will be found a number of paragraphs referring to the application of various food-stuffs in disease-conditions.

This book contains twenty or more illustrations, a few of them in colors, diagramming the fuel-value of the common foods, etc.

SHEFFIELD'S "DISEASES OF CHILDREN"

Modern Diagnosis and Treatment of Diseases of Children. A treatise on the medical and surgical diseases of infancy and childhood, with especial emphasis upon clinical diagnosis and modern therapeutics. For practitioners and students of medicine. By Herman B. Sheffield, M. D. With 150 original half-tone photoengravings and numerous smaller illustrations, some in colors. Philadelphia: F. A. Davis Company, 1911. Price $4.50.

The volume before us aims to be essentially a clinical treatise on the medical and surgical diseases of infancy and childhood, and to embody also the essentials of a theory of pediatrics. The general and special discussions on the examination of the patient, the prevention and control of disease and on the various classes of diseases show not only the author's wide and close knowledge of literature but also an extensive and varied personal experience, and his descriptions of diseases, their etiology, symptomatology, and diagnosis are excellent. In fact, the reviewer is strongly impressed with the merits of the author's opinions, all except the drug treatment, which appears to him somewhat crude.

The drug treatment of children has always been one of the difficult problems confronting the practitioner, and it is largely through their successes in pediatrics that homeopathic physicians have attained such a remarkable vogue. In these modern days, when we can substitute active principles and concentrations for practically all drugs that we find it desirable to prescribe, there is no excuse for any mixtures or the administration of crude drugs and of galenics. However, this is a matter of personal preference.

In some points the author has been rather too concise in his treatment of disease, and the reviewer would have liked to see especially such important chapters as those on constipation and on what we are still pleased to call rheumatism, whether acute or chronic, treated more fully and more in keeping with present-day knowledge.

Reference to the text is made convenient by the generous insertion of marginal subheads. The text is freely illustrated and the illustrations are excellent. With the exception of the drug treatment, as criticized above, the volume undoubtedly will prove very useful.

KIRMISSION'S "SURGERY OF CHILDREN"

A Handbook of the Surgery of Children. By E. Kirmission, Professor at the University of Paris. Translated by J. Keogh Murphy, M. C.; F. R. C. S. London: Oxford Medical Publications. 1910. Price $7.00.

This interesting treatise, written by one of the most noted French orthopedists, represents the opinions of a clinician of enormous experience, but also the teachings of the French school generally. The author has purposely omitted all pure theory, history, pathological anatomy, and pathogeny, in order to insist the better upon the things which are essential in practice, namely, symptoms, diagnosis, and treatment.

THE "CASE HISTORY" SERIES

Case Histories in Neurology. A selection of histories setting forth the diagnosis, treatment, and postmortem findings in

nervous disease. By E. W. Taylor, A. M., M. D. Boston: W. M. Leonard. 1911. Price $3.00.

Case Histories in Medicine; illustrating the diagnosis, prognosis, and treatment of disease. By Richard C. Cabot, M. D. Second edition, revised and enlarged. Boston: W. M. Leonard. 1911. Price $3.00.

We have already announced (CLINICAL MEDICINE, 1911, August, p. 913, and November, p. 1230) the series of "Case Histories" which is being published in Boston and have called attention to the thoroughly practical nature of the books. The two volumes before us fully justify our expectations of practical guides that would be of real value to the general practitioner. While Dr. Cabot is too well known as a clear and lucid writer and teacher that his book should need commendation, we are glad to note that Dr. Taylor's book also is entirely in keeping with the standard set for him. Both volumes, as well as the former ones of the series, are cordially recommended to our readers.

PROGRESSIVE MEDICINE

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. Philadelphia and New York: Lea & Febiger. Price, $6.00 per annum.

The first volume of this year's *Progressive Medicine* contains a contribution on surgery of the head, neck, and thorax, by Charles H. Frazier, M. D.; one on infectious diseases, including acute rheumatism, croupous pneumonia, and influenza; besides reviews on diseases of children, on rhinology and laryngology, and on otology.

As among the many good things presented in this number, the reviewer was interested in the use of ipecacuanha for aborting typhoid fever, as described on page 238. The experiences which have been reported on the use of this drug in amebic dysentery seem to suggest its applicability in typhoid fever, and the results obtained in six cases in the hands of Frazier are certainly very remarkable.

Progressive Medicine presents an excellent record of the advances made in medical sciences.

PAMMEL'S "POISONOUS PLANTS"

A Manual of Poisonous Plants, chiefly of eastern North America, with brief notes on economic and medicinal plants and numerous illustrations. By L. H. Pammel, Ph. D. Part II. Cedar Rapids, Iowa: The Torch Press. 1911. Price, for the complete work, $7.50.

The second part of this work, which is much larger than the preceding one (see CLINICAL MEDICINE, 1911, p. 566), presents the results of an enormous amount of research and contains valuable information on practically all known poisonous plants indigenous in our country. While physicians should, as a matter of course, have some familiarity with poisonous plants, the volume before us will naturally be of even greater value to the veterinarian, for whom an intimate knowledge of the subject is indispensable. As a matter of fact, the work was largely written for veterinarians, and it is to be hoped that they will accept it favorably, as it deserves. However, physicians will also find much in it of interest, and much that they could not find elsewhere as readily as it is presented here.

"LE PARIS MEDICAL"

The *Paris Médical* for March 2 devotes its entire issue to the consideration of questions relating to dermatology and syphilography. It contains papers by Dr. G. Milian: The dermatology and syphilography in 1912; Dr. E. Jeanselme: On the Wassermann reaction applied to the treatment of syphilis; Dr. L. Nattan-Larrier: Yaws and its spirochete; Dr. Marcel Pinard: Supersyphilization; Dr. Burnier: The culturing of the spirocheta pallida; Drs. Jacquet and Debat: The intensive plurimercurial treatment and its mode of action.

Le Paris Médical is an interesting weekly publication issued by Bailliere & Fils, Paris, France, costing $3.00 annually.

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERY

ANSWER TO QUERY 5791.—"Blepharitis." I have just been reading Query 5791, from W. B. S. of Idaho, in the last CLINICAL MEDICINE. I have watched a great many of these cases closely and would like to say that in every one there is a constitutional dyscrasia present, and that no amount of local treatment is likely to cure the patient till the depraved condition of the system is corrected. I do not mean by this our ordinary "clean-out-and-clean-up" treatment, although that is good and necessary, but I do mean that we must prescribe the directly indicated remedy which will correct that particular depravity of the system.

Let me give you a case history: When I was taking my first, or homeopathic, college course, our professor of diseases of the eye and ear always told us that pulsatilla was one of the most frequently indicated remedies for blepharitis marginalis.

A few years after, I had in my family a young college student who developed a very severe case of blepharitis, with the lid margins completely covered with yellow scabs. I took him to the eye clinic of my old professor, who to my surprise prescribed yellow oxide of mercury ointment locally, without directing any internal treatment at all. We used it faithfully for a number of days, with no effect at all, when I took the case into my own hands and prescribed a liberal dosage of the specific tincture of pulsatilla, with the result that the young man was completely cured within two weeks. I do not believe that any of these cases can be cured without correcting the depraved condition of the system. In the cases that I have seen or treated the remedy has usually been pulsatilla or sulphur, or both.

Many cases of eye trouble of various kinds are not cured because the attending oculist does not know how to give, or neglects to give, the absolutely necessary internal remedies.

Within a year I have seen a very good oculist doing his best to cause absorption of a retinal hemorrhage, but never giving anything to bring down the rapid high-tension pulse that was keeping up the congestion of the cerebral vessels that had caused the hemorrhage.

WM. M. GREGORY.

Berea, O.

QUERIES

QUERY 5799.—"Hypodermic Cathartics." J. M. M., Canada, referring to questions about available hypodermic cathartics, expresses the opinion that we do not need such a preparation very much, and goes on to say: "In my experience with apomorphine I found that one solitary tough old negro alone was acted upon in a peculiar way when that drug was exhibited. Instead of emesis being produced, he had a

very free passage. That was some years ago, and since then I have often thought it would be nice if we had a hypodermic tablet that would produce free catharsis.

"How about elaterin? It may be insoluble, but if made into the form of a sulphate, phosphate or hydrochloride, one of these might be soluble and we could then give it hypodermically.

"Again, when croton oil is shaken up with alcohol, it is separated into two parts, one of which is irritant and the other cathartic. Could we not eliminate the irritant portion, using only the cathartic element of the oil? Are not these elements different chemically?

"Then, again, what effect would be produced by giving a hypodermic of convallarin, which, on page 186 of Waugh-Abbott's 'Alkaloidal Therapeutics', is stated to be a cathartic.

"I will say that I am using the alkaloids more and more every day."

As bearing on this subject, let us call your attention, Doctor, to Query 5579, page 594, of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, for May, 1910. Also to Query 5597, in the June number of 1910, page 722. We will add that for several years we have tried to discover a satisfactory hypodermic cathartic, but so far have failed dismally. Arecoline and physostigmine act excellently in veterinary practice, but most humans fail to respond to either drug. In some instances, arecoline produces copious dejections; in other individuals, twice the amount of drug may be given without any effect whatever; other people, again, suffer severely from headache and nausea. Physostigmine has produced very unpleasant symptoms in many instances, but rarely catharsis.

As elaterin is not an alkaloid, it would be impossible to produce salts such as you suggest. We will make some experiments with croton oil. Alcohol, as we understand it, would remove or hold in suspension the vesicant and also the purgative principles. And it is not desirable (although possible), as you are aware, to use alcoholic preparations hypodermically. Furthermore, we should strongly object to having any preparation or derivative of tiglium oil injected into our tissues. A most annoying pustular eruption would probably be produced under any circumstances. The common croton oil tablets contain a stated quantity of repurified tiglium oil. Convallarin when given in large doses acts as a purgative. It is not safe, however, and could not be exhibited hypodermically, at least in such quantities as would produce catharsis.

Perhaps the most satisfactory hypodermic cathartic, after all, is chemically pure magnesium sulphate. The only undesirable features are the large dose required and the alleged toxicity of this salt when introduced into the blood. Two grains in sterile solution produce copious dejections usually within three hours. We can empty the alimentary tract just as rapidly by colonic flushing and a full dose of castor oil, either with or without the addition of a minim or more of croton oil. But, as a matter of fact, it is rarely necessary to produce immediate purgation. Very prompt evacuation both of stomach and bowel can be secured by methods well known to all practicians.

We note with satisfaction that you are increasingly using the alkaloids as you gather experience with them. That way lies success, Doctor. May it be your always.

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QUERY 5800.—"Diabetes Mellitus." J. H. B., New York, requests assistance in the case of a man about 40 years of age afflicted with diabetes for three years. He has tried numerous physicians but without much benefit. The man came under observation a few weeks ago, and the doctor, having recently started practice in this vicinity, would like to make a favorable impression.

The man's urine is loaded with sugar, specific gravity 1055; he has lost strength and lost in weight, from 185 pounds to 125 pounds. A severe diarrhea existed, but that is now under control. He passes about three quarts of urine a day. At present he drinks little water. Medication: Codeine, ergotin, pepsin, intestinal antiseptic, chionanthus. Under this treatment he feels better and thinks a cure possible.

Before offering any definite therapeutic suggestions, we should like to have a clearer idea of the clinical conditions present in this particular case. Send a specimen of the patient's urine (4 ounces from the total 24-hour quantity, stating that amount), state character of stools, condition of tongue, describe the patient's habits, occupation, etc., give some idea of family history, and whether under carbohydrate-free diet sugar disappears. You merely say, "I keep him upon the best diet practicable."

Below we outline a diabetic dietary which we have found satisfactory in many cases:

Breakfast: Chief dish, bacon and a scrambled egg. Extra: Toasted bread (1 oz.), plenty of butter. Tea with diabetic milk and saccharin. At 11 a. m., 1-2 pint of diabetic milk.

Dinner: Chief dishes: Meat (4 ozs.), green vegetables, butter, custard pudding made with diabetic milk and two eggs. Extra: Potatoes (2 ozs.) plenty of butter, water, spirits and water, or some dry wine.

Tea: One egg, bread (1 oz.), plenty of butter. Tea or coffee with diabetic milk and saccharin.

Supper: Fish (2 ozs.) with butter sauce. One pint of diabetic milk.

This diet contains about 85 Grams of proteid and 225 Grams of fat, not reckoning the carbohydrate, and has an energy-value of about 2500 calories. By the use of some alcoholic drink at dinner and supper the value of the diet could easily be raised to 3000 calories, and upon this most cases will be found to gain weight. In milder cases, in which more proteid is advisable, one can easily double the quantity of meat or fish, and the proportion of fat can be raised by the use of thick cream in tea and its addition to mashed potatoes. In cases in which a strict diet is being enforced, one can replace the bread and potatoes by an extra allowance of milk and eggs and a more liberal use of alcohol. In mild cases, where there is considerable tolerance of carbohydrates, the quantity of fat in the diet may be considerably reduced.

It need hardly be said that the above diet is merely given as a sample. Its proteid and fat-containing ingredients may be widely varied to suit the patient.

In all mild cases the carbohydrates may be excluded for two or three weeks. In this time toleration arises and degenerations are checked. The carbohydrates may then be added gradually in accordance with the knowledge gained by our study of the individual conditions, the quantity, however, being always kept below the limit of toleration. From time to time the patient should abstain from carbohydrates for a week or two, the fats being increased to avoid debility. However, in every instance, both treatment and diet must be devised to suit the man. We cannot make the individual conditions conform to a definite treatment, the main point in every instance being the reduction of glycosuria to the lowest possible limit.

Nearly every diabetic suffers from autotoxemia. Examination of the urine reveals in practically every instance more or less intestinal fermentation together with an insufficient output of urea. It is, therefore, essential to remove the autointoxication and restore a fairly normal condition in the digestive tract. To this end, we may give strychnine arsenate, gr. 1-72; iron arsenate, gr. 1-64; lithium benzoate, gr. 1-3; quassin, gr. 1-64, four times daily. Pancreo-papayotin compound an hour after food. Dilute hydrochloric acid, 10 minims, well diluted with water, with meals. Calomel, gr. 1-6; iridin, gr. 1-6; podophyllin, gr. 1-12; at 6, 7, 8 and 9 o'clock every other evening. Every morning upon rising a saline laxative. Order daily sponge baths, preferably of epsom-salt solution. Also do not forget to flush the colon with normal salt solution at body-temperature.

This treatment faithfully carried out should make a decided impression within four weeks.

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QUERY 5801.—"Are Teniacides Dangerous?" T. B. R., Texas, inquires whether extract of male fern with castor oil and chloroform would be dangerous to a person who has mitral regurgitation, and what heart stimulants, if any, should be used in such connection?

The teniacides should not prove dangerous to an individual suffering from mitral regurgitation. It might be a good idea to

allow some of the chloroform to evaporate before exhibiting the mixture, while the patient should be instructed to keep on his feet and move about after swallowing it.

Should untoward effects result, aromatic spirit of ammonia might advantageously be given, or also strychnine, hypodermically. In desperate cases, ammonia may be injected intravenously. Enemas of strong coffee or whisky prove useful. Body warmth should be maintained by the application of hot-water-bottles or mustard sinapisms. The stomach should be washed out, if possible, at the earliest possible moment. When respiration or the heart action stops or threatens cessation after the ingestion of chloroform, artificial respiration should be resorted to, with, perhaps, inhalations of pure oxygen, and tongue traction. The faradic current, if available, may advantageously be applied. The steps here outlined are those usually followed in chloroform poisoning.

The amount of chloroform present in the adult dose is hardly likely to prove toxic under any circumstances, but it is just possible that in certain cardiac disorders more or less circulatory depression might follow its exhibition. The inhalation and exhibition of the aromatic spirit of ammonia or the hypodermic injection of strychnine would, we think, speedily control conditions.

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QUERY 5802.—"Cheese and Constipation." L. A. M., Nebraska, asks: "(1) Why and how does ordinary rich American cheese constipate the bowels? (2) How does boiled hot milk constipate? We know this is often the case. What I want is a brief, clear, scientific reason, be it physical, chemical, electrical or physiological. Cheese being largely proteid, it is digested by pepsin assisted by constituents of the bile, with the process completed by enterokinase in the intestine."

We believe we can best serve you by referring you to the United States Department of Agriculture, Bureau of Animal Industry, Washington, D. C. Request a copy of C. F. Doane's report upon "The Digestibility of Cheese." A. D. Melvin is chief of the Bureau. The work described in this Bulletin comprised a thorough study of the food-value of several varieties of cheese—particularly the socalled American, or Cheddar, variety—under a great variety of conditions. The experiments were carried out with human subjects both at rest and while doing hard manual labor. Langworthy, in charge of the nutrition investigations for the Government, prepared the work for publication. We believe you will obtain all the information you desire from this pamphlet. It would require much research and considerable time to write the opinion you ask us to prepare, while our conclusions—correct though they might be—naturally would always be open to criticism.

We are changing our views rapidly and the majority of dieticians now believe cheese to be a most digestible substance. Furthermore, most cheeses do *not* cause constipation in the majority of individuals; extensive tests have proven that regular normal stools are quite apt to follow a cheese diet. More minor bowel disorders have been corrected by a cheese regimen than have been caused thereby.

The more recent experiments have proven "green," i. e., fresh, cheese and also curds to be quite as digestible (or even more so) than old, well-ripened cheese. The casein of cheese, fresh from the press or fermented and thoroughly ripened, is readily assimilated even when given in comparatively large quantities. The investigator reports, "contrary to general belief," that the cheese diet did not appear to cause constipation.

Boiling increases the density of milk: at 212° F. the starch-liquefying ferment is destroyed, the casein is rendered less coagulable, therefore is acted upon slowly and imperfectly by pepsin and pancreatin, and the milk-sugar is, to a certain degree, destroyed.

Pure milk consists of a multitude of cells suspended in serum, the fat-cells form the cream. Other cells are nucleinated and resemble white blood-corpuscles. The serum consists of water carrying in suspension milk-sugar, serum-albumin, the various salts, and casein. The cells, with the exception of fat-cells, are "living" and

retain their vitality for a long time after the milk is withdrawn from the mammary glands. When fresh milk is ingested some of these cellular elements enter the blood stream without being acted upon by the digestive ferments. The casein is digested in the same way as other albuminoids by the gastric juice and absorbed as peptone. There is also absorption of milk-serum by osmosis.

The chemical result of boiling milk is to kill all the living cells and to coagulate all the albuminoid constituents. As stated, boiled milk is thicker than the unboiled. We do not yet understand thoroughly the changes which are produced by boiling. Some of the lactose is converted into caramel; the lactalbumin is partly coagulated at 160° F. At 185° F. a volatile sulphide is liberated, this evidencing conclusively a change in the casein composition; organic phosphorus is changed into an inorganic phosphate; the lime salts, usually soluble, are rendered insoluble. The natural ferments necessary to perfect digestion are entirely destroyed. Milk heated to 212° F. is not easily digested, causes constipation, and should not be fed to infants.

A very instructive chapter on this subject will be found in Harrington's "Practical Hygiene." Holt and Fischer, in their recent works upon diseases of infants and children also discuss the question at length.

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QUERY 5803.—"Acute Cowperitis and Urethral Fistula." A. L. J., Iowa, sends a specimen of pus, taken from a urethral fistula, for microscopical examination and presents the following data:

"Young married man, farmer, came to me complaining of swelling on penis and of a discharge during now three weeks. This discharge, I found, was somewhat thinner than the specimen sent. There was a swelling, similar to a boil, over the urethra and about one inch from the head of the penis, and, upon lancing, considerable pus and blood escaped. The whole organ, down to and including the prostate gland, was hard and tender, and rectal examination showed the latter to be enlarged considerably. The man absolutely denies any gonorrheal infection, at least from sexual intercourse. His wife, who knows all about it, has no infection. The abscess healed, but left a fistulous opening in the urethra, which allows extravasation of urine, about half of which is passed normally. Now, after three weeks, the prostatic enlargement is decreasing. There is not much induration, except just below testis, where a rather hard indurated portion shows similar to the first abscess, only not soft.

"When will it be proper time to repair the fistula, which probably would not heal now, owing to the discharge. The patient is pale, but feels better. He gets iron, calcium sulphide, laxatives, principally."

We are inclined to believe that this man suffered from an acute infective cowperitis; the absence of gonococci from the present discharge does not mean that the Neisser bacillus was not there in the first place. Acute inflammation of Cowper's glands occurs three or four weeks, usually, after infection of the urethra. Owing to the long course of the duct, which, as you know, communicates with the bulbous urethra, pus in the glands is not easily discharged, whence suppuration is frequent. Urethral abscesses occur either from the local infection of a gland during an acute gonorrhea or behind a stricture. Acute abscesses are red, edematous, and exquisitely tender. The chronic variety is stony hard and often painless.

In this case it strikes us that the entire deep urethra was involved and a cowperitis coexisted. The urethral abscess should have been opened early. Early incisions save sloughing, and it is not necessary to open up the urethra. Where there is delay in opening an acute abscess the urethral wall is pretty sure to slough and a urinary fistula results. You do not say whether you have passed a sound, and, we, therefore, are unable to decide whether or not a stricture exists. If such a constriction exists, it is just above the fistula and it will be necessary to dilate it. A re-contraction must not be permitted.

The treatment of the fistula itself is distinctly surgical, but its origin is of im-

portance when we come to make a prognosis and outline treatment. If it is the result of a septic necrosis and sloughing of the urethral wall (acute urethritis), there may not be enough tissue left to sew up. If the fistula had its origin in a chronic urethral abscess, i. e., perforation behind the stricture, the stricture must be treated before the fistula is closed.

We suggest that you familiarize yourself with the conditions which obtain before proceeding further. In all operations for the repair of fistula it is first necessary to separate the internal and external openings and then, by removing the epitheliated tract, interpose a raw area. Many operations for urethral fistula fail because the internal opening of the fistula is not perfectly closed. As a result, the urine gains entry to the wounds and interferes with union.

The ordinary procedures may be outlined briefly as follows: Pass a full-sized sound, thus insuring patency of the canal. Separate the openings of the fistula and curette the intermediate tissues or excise the tract. Close the inner opening by stitching the urethra together over a sound. Withdraw the urine, by passing a catheter under aseptic conditions, three or four times daily, thus preventing extravasation of urine. It is better to pass a catheter at intervals than to keep it in place. The inner opening having been closed, approximate the denuded surfaces and then suture. Get as much contact as possible. Close the skin. Sometimes it is impossible to close the urethral end of the fistula thoroughly. Then it is essential to pass a catheter until the healing of the wound has progressed to such an extent that urine cannot percolate into the tissues. Use iodized catgut and the smallest needle possible.

Before repairing the fistula render the urine bland and aseptic by giving your patient copious draughts of barley water, and formin or similar urinary antiseptics every three hours. Cleanse the urethra and fistulous opening first with a diluted solution of hydrogen dioxide (1:3), then with warm boric-acid solution. Or you may use this formula: Zinc sulphocarbolate, 20 grains; boric acid, 10 grains; water, 1 ounce. Then apply to the fistula gauze saturated with an antiseptic oil.

It is just possible that you have a serious condition of the prostate gland to deal with and that incision and drainage may be necessary. It strikes us that the best procedure in this case would be to place the young man in a hospital, under the charge of a thoroughly experienced and competent specialist.

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QUERY 5805.—"Phosphaturia." C. L. P., Mississippi, is treating, but without success, a male patient, age 24, who has been sick six years. "Weight, 96 pounds—six years ago it was 135 pounds; pulse, 61, tension moderate; no headache; no pains in the body; is badly constipated, the stools being light-colored; voids 22 ounces of urine in twenty-four hours. He has taken epsom salt every day for two years—from a teaspoonful to a tablespoonful. He craves food continually; says it is impossible to control his desire—that he would eat if he knew it would kill him. Craves sweets, doesn't want any vegetables. Starches, sweets, and greasy foods do not agree with him. When he eats too much he can bring on vomiting by pressing on the stomach. Sweets or fats turn sour in the stomach; they cause mucous stools. He never passes any gases. Uses no coffee, tea or tobacco. Craves water. Sleeps well when the stomach does not bother. He is not nervous."

The report of the pathologist upon the specimen of this man's urine shows a marked phosphaturia. First and foremost, Doctor, correct this man's diet. Cut out absolutely pastry, greasy foods, and sweets. Order him to live for a time upon fruit, fresh fish, eggs, milk, and bread twenty-four hours old, and, preferably, made from whole wheat. Give quassin and xanthoxyloid before meals, papayotin and charcoal after eating. Between meals the phosphates of calcium, iron, potassium, and manganese, with nuclein. Order a saline laxative the next morning upon rising. A salt sponge-bath every other might on retiring, a brisk rub, would help. Try faradizing the gastric area (and spine). Are there worms?